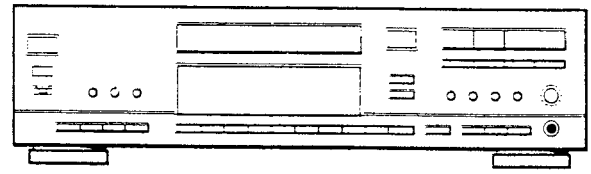
S/M Code No.0147 DATE OF ISSUE 12/1992 - T

aiwa

XC-550
XC-950

SERVICE MANUAL



COMPACT DISC PLAYER

• BASIC CD MECHANISM : KSL – 2101ABM

• TYPE. E, K, HE (XC – 550)
E, K (XC – 950)

SPECIFICATIONS

XC - 550

Disc	Compact disc
Scanning method	Non contact optical scanner (semiconductor laser application)
Laser	Semiconductor laser (λ = 780 nm)
Rotation speed	Approx. 500rpm-200rpm (CLV)
Error correction	Cross interleave, Reed Solomon code
No. of channels	2 channels
D-A conversion	1 bit
Wow/Flutter	Unmeasurable
Signal to noise ratio	97 dB (1 kHz, 0 dB)
Harmonic distortion	0.0035 % (1 kHz, 0 dB)
Digital filter	8 times over sampling 18 bit digital filter
Output terminals	ANALOG OUT : 1.84V DIGITAL OUT : optical link connector
Power consumption	10W
Power requirements	E : 230V AC, 50 Hz K : 240V AC, 50 Hz HE : 120/220/240V AC, 50/60 Hz
Dimensions(W × H × D)	430 × 115 × 321 mm (17 × 4 5/8 × 12 3/4 in)
weight	4.4kg (9.7 lb)

• Design and specifications are subject to change without notice.

XC - 950

Disc	Compact disc
Scanning method	Non contact optical scanner (semiconductor laser application)
Laser	Semiconductor laser (λ = 780 nm)
Rotation speed	Approx. 500rpm-200rpm (CLV)
Error correction	Cross interleave, Reed Solomon code
No. of channels	2 channels
D-A conversion	1 bit
Wow/Flutter	Unmeasurable
Signal to noise ratio	105 dB (1 kHz, 0 dB)
Harmonic distortion	0.0025 % (1 kHz, 0 dB)
Digital filter	8 times over sampling 20 bit digital filter
Power consumption	15W
Power requirements	E : 230V AC, 50 Hz K : 240V AC, 50 Hz
Dimensions(W × H × D)	430 × 115 × 316 mm (17 × 4 5/8 × 12 1/2 in)
weight	4.6kg (10.1 lb)

• Design and specifications are subject to change without notice.

AIWA CO.,LTD.

Tokyo Japan

Printed in Japan

DISASSEMBLY INSTRUCTIONS

1. "Tray" Removal (See Figure – 1)
   1) Remove the "Cabinet, Steel".
   2) ♠For AUTOMATIC operation
      Press the OPEN/CLOSE button to eject the "Tray".
      ♠For MANUAL operation
      Insert a flat – head screwdriver into the hole at the bottom of the arrow to eject the "Tray".
      (See Figure – 1)
   3) Loosen 2 screws (Ⓐ) and pull out the "Tray" toward you. (See Figure – 2)

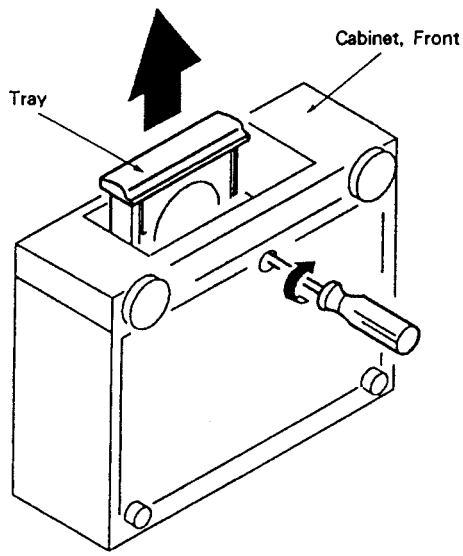


Fig – 1

2. "CD Mechanism" Removal (See Figure – 2)
   1) Loosen 2 screws (Ⓐ) and remove the "Tray", remove 3 screws (Ⓑ) and remove "CD Mechanism".

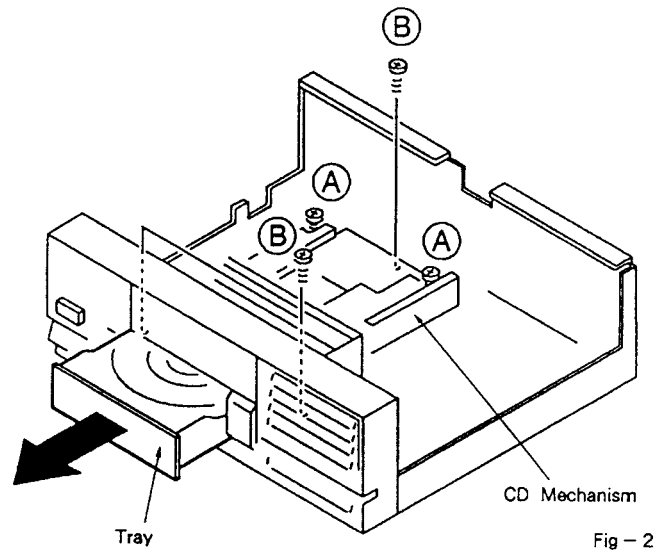


Fig – 2

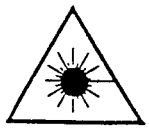
■ ACCESSORIES/PACKAGE LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q,TY
	1	★82-AC3-901-018	INSTRUCTION BOOKLET, E (XC – 550E, K)	※	1
	2	★82-AC3-901-019	INSTRUCTION BOOKLET, E (XC – 550H)	※	1
	3	★82-AC1-901-018	INSTRUCTION BOOKLET, E (XC – 950E, K)	※	1
	4	★82-AC3-951-010	REMOTE CONTROLLER RC – C550 (XC – 550E, K)	※	1
	5	★82-AC3-951-019	REMOTE CONTROLLER RC – C550 (XC – 550H)	※	1
	6	★82-AC1-951-010	REMOTE CONTROLLER RC – C950 (XC – 950E, K)	※	1
	7	★87-034-786-019	CORD, PIN 189 – 0760 (XC – 550H)		1
	8	★87-034-773-010	CORD, PIN R – 237W – 1M (XC – 550, 950E, K)		1

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion.
  Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

CLASS 1
LASER PRODUCT

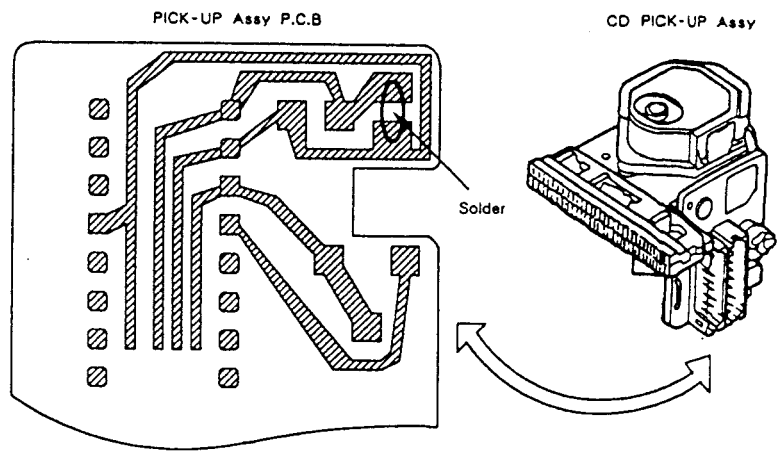
LUOKAN 1
LASERLAITE

KLASS 1
LASER APPARAT

Precaution to replace Optical block (KSS – 210A)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure to ground body and workbench, and make sure the clothes do not touch the diode.

1) After the connection, remove the solder shown in the right figure.



ELECTRICAL MAIN PARTS LIST
XC – 550

REF. NO.	PART NO.	DESCRIPTION
===IC===		
	87-001-440-010	IC, BA15218N
	87-001-184-010	IC, CXA1081S
	87-001-400-010	IC, CXA1082S
	87-001-944-010	IC, CXD-1167Q
	80-AC4-608-010	IC, CXP50112-198Q
	87-002-211-010	IC, GP1F32T(DIGITAL OUT)
	⚠87-001-486-080	IC, ICP-N15
	87-001-173-010	IC, LA6510
	87-002-348-010	IC, NJM4580D
	87-001-641-010	IC, NJM779M05FA
	87-020-903-010	IC, NJM7805FA
	87-020-910-089	IC, PST-523F
	87-002-347-010	IC, SAA7350
	87-001-790-010	IC, SBX1610-52 UNIT(REMOTE SENSOR)
	87-002-279-010	IC, SM5840ES
	87-001-169-010	IC, STA341M
===TRANSISTOR===		
	89-213-292-089	TRANSISTOR, 2SB1329Q
	89-213-321-089	TRANSISTOR, 2SB1332R(T105)
	87-026-500-089	TRANSISTOR, 2SD2144S, UV(TP)
	87-026-219-089	TRANSISTOR, DTA144ES
	87-026-464-089	TRANSISTOR, DTC114TS
	87-026-218-089	TRANSISTOR, DTC144ES
===DIODE===		
	87-027-376-019	DIODE, 1B4B41
	87-001-574-089	DIODE, 1SR139-200
	87-020-465-089	DIODE, 1SS133
	87-001-187-010	DIODE, S5277B LC6
	87-027-661-089	DIODE, ZENER HZ30-2L
	87-027-393-089	DIODE, ZENER HZ4C-2
	87-027-555-089	DIODE, ZENER HZ5C2
===MAIN CIRCUIT BOARD SECTION===		
C101	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C102	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C103	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C104	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C105	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C106	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C107	★87-010-404-089	CAP, ELECT 4.7-50 SME
C108	★87-010-404-089	CAP, ELECT 4.7-50 SME
C109	★87-010-401-089	CAP, ELECT 1-50 SME
C111	★87-010-400-089	CAP, ELECT 0.47-50 SME
C112	★87-018-133-089	CAP, CERA-SOL SS 4700P-16 X
C113	★87-010-374-089	CAP, ELECT 47-10
C114	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C115	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C116	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C117	★87-010-370-089	CAP, ELECT 330-6.3 SME
C118	★87-010-408-089	CAP, ELECT 47-50 SME
C119	★87-010-370-089	CAP, ELECT 330-6.3 SME
C132	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C134	★87-010-404-089	CAP, ELECT 4.7-50 SME
C135	★87-018-131-089	CAP, CERA-SOL SS 1000P-50 B
C139	★87-010-403-089	CAP, ELECT 3.3-50 SME
C142	★87-018-209-089	CAP, CERA-SOL SS 0.1-50 F
C143	★87-018-111-089	CAP, CERA-SOL SS 27P-50 SL
C151	★87-018-132-089	CAP, CERA-SOL SS 2200P-16 X
C152	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C153	★87-018-127-089	CAP, CERA-SOL SS 470P-50 B
C156	★87-010-405-089	CAP, ELECT 10-50 SME
C157	★87-010-401-089	CAP, ELECT 1-50 SME
C159	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C160	★87-010-404-089	CAP, ELECT 4.7-50 SME
C161	★87-010-374-089	CAP, ELECT 47-10
C162	★87-010-374-089	CAP, ELECT 47-10
C164	★87-010-374-089	CAP, ELECT 47-10
C165	★87-010-131-089	CAP, ELECT 0.47-50 BP
C167	★87-018-202-089	CAP, CERA-SOL SS 6800P-16 X
C168	★87-018-202-089	CAP, CERA-SOL SS 6800P-16 X
C171	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C172	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C173	★87-010-263-089	CAP, ELECT 100-10
C174	★87-018-131-089	CAP, CERA-SOL SS 1000P-50 B
C175	★87-010-405-089	CAP, ELECT 10-50 SME
C176	★87-018-103-089	CAP, CERA-SOL SS 8.2P-50 SL
C177	★87-018-132-089	CAP, CERA-SOL SS 2200P-16 X
C178	★87-010-265-089	CAP, ELECT 33-16 SME
C179	★87-010-384-089	CAP, ELECT 100-25 SME
C180	★87-010-265-089	CAP, ELECT 33-16 SME
C181	★87-010-374-089	CAP, ELECT 47-10
C182	★87-010-374-089	CAP, ELECT 47-10
C183	★87-010-374-089	CAP, ELECT 47-10
C191	★87-010-400-089	CAP, ELECT 0.47-50 SME
C192	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C193	★87-018-209-089	CAP, CERA-SOL SS 0.1-50 F
C301	★87-018-150-089	CAP, CERA-SOL SS 18P-50 CH
C302	★87-018-150-089	CAP, CERA-SOL SS 18P-50 CH
C311	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C312	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C313	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C314	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C315	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C316	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C317	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C318	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C323	★87-014-069-089	CAP, PP 3300P-100 J
C324	★87-014-069-089	CAP, PP 3300P-100 J
C325	★87-014-047-089	CAP, PP 390P-100 J
C326	★87-014-047-089	CAP, PP 390P-100 J
C329	★87-010-914-080	CAP, ELECT 47-10 BP ASF
C330	★87-010-914-080	CAP, ELECT 47-10 BP ASF
C337	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C338	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C341	★87-018-127-089	CAP, CERA-SOL SS 470P-50 B
C342	★87-018-127-089	CAP, CERA-SOL SS 470P-50 B
C343	★87-018-127-089	CAP, CERA-SOL SS 470P-50 B
C344	★87-018-127-089	CAP, CERA-SOL SS 470P-50 B
C351	★87-010-374-089	CAP, ELECT 47-10
C352	★87-010-374-089	CAP, ELECT 47-10
C353	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C354	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C355	★87-010-374-089	CAP, ELECT 47-10
C356	★87-010-374-089	CAP, ELECT 47-10
C357	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C358	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C359	★87-010-374-089	CAP, ELECT 47-10
C360	★87-010-374-089	CAP, ELECT 47-10
C361	★87-010-374-089	CAP, ELECT 47-10
C362	★87-010-374-089	CAP, ELECT 47-10
C363	★87-010-374-089	CAP, ELECT 47-10
C364	★87-010-374-089	CAP, ELECT 47-10
C365	★87-010-374-089	CAP, ELECT 47-10
C366	★87-010-374-089	CAP, ELECT 47-10
C382	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C383	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C384	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C385	★87-018-115-089	CAP, CERA-SOL SS 47P-50 SL
C386	★87-018-131-089	CAP, CERA-SOL SS 1000P-50 B
C387	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C388	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C401	★87-010-124-099	CAP, ELECT 4700-16
C402	★87-015-997-099	CAP, ELECT 2200-16 SME

REF. NO.	PART NO.	DESCRIPTION
C403	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C404	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C405	★87-010-263-089	CAP, ELECT 100-10
C406	★87-010-263-089	CAP, ELECT 100-10
C407	★87-010-410-089	CAP, ELECT 330-50 SME
C408	★87-018-209-089	CAP, CERA-SOL SS 0.1-50 F
C409	★87-018-209-089	CAP, CERA-SOL SS 0.1-50 F
C410	★87-010-235-089	CAP, ELECT 470-16 SME
C411	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C420	★87-018-214-019	CAP, CERA-SOL SS 0.1-50 F
C481	★87-010-101-089	CAP, ELECT 220-16 SME
C482	★87-010-101-089	CAP, ELECT 220-16 SME
C499	★87-018-214-019	CAP, CERA-SOL SS 0.1-50 F
EM102	★87-008-372-089	FILTER, EMI BL
EM103	★87-008-372-089	FILTER, EMI BL
EM104	★87-008-372-089	FILTER, EMI BL
EM301	★87-008-372-089	FILTER, EMI BL
EM303	★87-008-372-089	FILTER, EMI BL
EM304	★87-008-372-089	FILTER, EMI BL
J101	★87-009-052-019	JACK, PIN 2P(ANALOG OUT)
J102	87-002-211-010	IC, GP1F32T(DIGITAL OUT)
R116	★87-025-429-089	RES, M/F 47K-1/6W F
R117	★87-025-429-089	RES, M/F 47K-1/6W F
SFR101	★87-024-169-089	SFR, 2.2K
SFR151	★87-024-173-089	SFR, 22K
SFR152	★87-024-173-089	SFR, 22K
SFR153	★87-024-173-089	SFR, 22K
SFR154	★87-024-173-089	SFR, 22K
X301	★84-733-617-019	RESONATOR, CRYSTAL 16.9344MHZ
		===FRONT-1 CIRCUIT BOARD SECTION===
FL201	★89-AC3-609-010	FL, FV401G(DISPLAY)
FW201	★89-AC1-641-110	CABLE, FLAT
SW201	87-036-215-089	SW, TACT(1) (HE)
SW201	87-036-259-088	SW, TACT(1) (E, K)
SW202	87-036-215-089	SW, TACT(2) (HE)
SW202	87-036-259-088	SW, TACT(2) (E, K)
SW203	87-036-215-089	SW, TACT(3) (HE)
SW203	87-036-259-088	SW, TACT(3) (E, K)
SW204	87-036-215-089	SW, TACT(4) (HE)
SW204	87-036-259-088	SW, TACT(4) (E, K)
SW205	87-036-215-089	SW, TACT(5) (HE)
SW205	87-036-259-088	SW, TACT(5) (E, K)
SW206	87-036-215-089	SW, TACT(6) (HE)
SW206	87-036-259-088	SW, TACT(6) (E, K)
SW207	87-036-215-089	SW, TACT(7) (HE)
SW207	87-036-259-088	SW, TACT(7) (E, K)
SW208	87-036-215-089	SW, TACT(8) (HE)
SW208	87-036-259-088	SW, TACT(8) (E, K)
SW209	87-036-215-089	SW, TACT(9) (HE)
SW209	87-036-259-088	SW, TACT(9) (E, K)
SW210	87-036-215-089	SW, TACT(10) (HE)
SW210	87-036-259-088	SW, TACT(10) (E, K)
SW211	87-036-215-089	SW, TACT(>10) (HE)
SW211	87-036-259-088	SW, TACT(>10) (E, K)
SW212	87-036-215-089	SW, TACT(PRGM) (HE)
SW212	87-036-259-088	SW, TACT(PRGM) (E, K)
SW213	87-036-215-089	SW, TACT(CHECK) (HE)
SW213	87-036-259-088	SW, TACT(CHECK) (E, K)
SW214	87-036-215-089	SW, TACT(DELETE) (HE)
SW214	87-036-259-088	SW, TACT(DELETE) (E, K)
SW215	87-036-215-089	SW, TACT(AC) (HE)
SW215	87-036-259-088	SW, TACT(AC) (E, K)
SW216	87-036-215-089	SW, TACT(■STOP) (HE)
SW216	87-036-259-088	SW, TACT(■STOP) (E, K)
SW217	87-036-215-089	SW, TACT(❚❚PAUSE) (HE)
SW217	87-036-259-088	SW, TACT(❚❚PAUSE) (E, K)
SW218	87-036-215-089	SW, TACT(▶PLAY) (HE)
SW218	87-036-259-088	SW, TACT(▶PLAY) (E, K)
SW219	87-036-215-089	SW, TACT(◀◀SKIP) (HE)
SW219	87-036-259-088	SW, TACT(◀◀SKIP) (E, K)
SW220	87-036-215-089	SW, TACT(▶▶SKIP) (HE)
SW220	87-036-259-088	SW, TACT(▶▶SKIP) (E, K)
SW221	87-036-215-089	SW, TACT(◀◀SEARCH) (HE)
SW221	87-036-259-088	SW, TACT(◀◀SEARCH) (E, K)
SW222	87-036-215-089	SW, TACT(▶▶SEARCH) (HE)
SW222	87-036-259-088	SW, TACT(▶▶SEARCH) (E, K)
SW223	87-036-215-089	SW, TACT(▲OPEN/CLOSE) (HE)
SW223	87-036-259-088	SW, TACT(▲OPEN/CLOSE) (E, K)
		===FRONT-2 CIRCUIT BOARD SECTION===
SW224	87-036-215-089	SW, TACT(TIME)
SW225	87-036-215-089	SW, TACT(BLANK)
SW226	87-036-215-089	SW, TACT(RANDOM)
SW227	87-036-215-089	SW, TACT(—►)
SW228	87-036-215-089	SW, TACT(◄—)
SW229	87-036-215-089	SW, TACT(1/ALL)
		===PT CIRCUIT BOARD SECTION===
⚠C421	★87-019-113-090	CAP, ELECT SG2200P-400(FMG)
⚠PT401	82-AC3-605-029	POWER TRANSFORMER H(HE)
⚠PT401	82-AC3-603-018	POWER TRANSFORMER E/Z(E)
⚠PT401	82-AC3-604-019	POWER TRANSFORMER K(K)
⚠SW401	★87-036-015-019	SW, PUSH(POWER)
⚠SW402	★87-036-229-019	SW, SLIDE(AC VOLTAGE) (HE)
		===HP CIRCUIT BOARD SECTION===
C371	★87-010-374-089	CAP, ELECT 47-10
C372	★87-010-374-089	CAP, ELECT 47-10
C373	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C374	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C391	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C392	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C393	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
EM391	★87-008-372-089	FILTER, EMI BL
EM392	★87-008-372-089	FILTER, EMI BL
EM393	★87-008-372-089	FILTER, EMI BL
J302	★87-009-043-019	JACK, 6.3(PHONES)
VR301	★82-AC3-608-010	VR, 50KAX2(LEVEL)
		===MOTOR-1 CIRCUIT BOARD SECTION===
M1	9X-262-513-210	MOTOR GEAR ASSY(SLED)
M2	9X-262-513-310	MOTOR ASSY(W/CHASSIS, T.T)(SPINDLE)
SW1	91-572-086-110	SW, LEAF(INSIDE LIMIT)
		===MOTOR-2 CIRCUIT BOARD SECTION===
M3	9X-262-511-710	MOTOR ASSY(LOADING)
SW2	91-572-086-110	SW, LEAF(OPEN)
SW3	91-572-086-110	SW, LEAF(CLOSE)
		===MISCELLANEOUS===
	98-848-127-11Z	OPTICAL PICK UP KSS-210A
⚠	★82-187-797-019	AC CORD(E) (HE)
⚠	★87-034-781-018	AC CORD(E) (E)
⚠	★87-034-592-018	AC CORD(K) (K)
⚠	★87-085-185-010	BUSHING, AC CORD

XC – 950

REF. NO.	PART NO.	DESCRIPTION
===IC===		
	87-001-184-010	IC, CXA1081S
	87-001-400-010	IC, CXA1082S
	87-001-944-010	IC, CXD1167Q
	80-AC2-610-010	IC, CXP50112-323Q
	87-002-211-010	IC, GPIF32T(DIGITAL OUT)
	⚠87-001-486-010	IC, ICP-N15
	87-001-173-010	IC, LA6510
	87-002-394-010	IC, LB1641
	87-020-883-010	IC, M74HCU04
	87-001-555-010	IC, NJM2903D
	87-002-727-019	IC, NJM4558L
	87-002-348-010	IC, NJM4580D
	87-001-596-010	IC, NJM4580L
	87-020-903-010	IC, NJM7805FA
	87-020-881-010	IC, NJM78L05A
	87-002-393-010	IC, NJM78M08FA
	87-001-641-010	IC, NJM79M05FA
	87-002-392-010	IC, NJM79M08FA
	87-020-910-010	IC, PST523F
	87-002-347-010	IC, SAA7350
	87-001-790-010	IC, SBX1610-52(REMOTE SENSOR)
	87-002-244-010	IC, SM5840DS
	87-001-169-010	IC, STA341M
===TRANSISTOR===		
	89-502-464-010	FET, 2SK246Y
	89-213-292-019	TRANSISTOR, 2SB1329Q
	89-213-321-019	TRANSISTOR, 2SB1332R
	89-318-154-019	TRANSISTOR, 2SC1815Y
	87-026-500-019	TRANSISTOR, 2SD2144S, UV
	87-026-214-019	TRANSISTOR, DTA114YS
	87-026-219-019	TRANSISTOR, DTA144ES
	87-026-464-019	TRANSISTOR, DTC114TS
	87-026-218-019	TRANSISTOR, DTC144ES
===DIODE===		
	87-027-376-019	DIODE, 1B4B41
	87-001-574-019	DIODE, 1SR139-200
	87-020-465-019	DIODE, 1SS133
	87-001-187-010	DIODE, S5277B, LC6
	87-027-451-019	DIDOE, ZENER HZ27-2L
	87-027-393-019	DIODE, ZENER HZ4C2
	87-027-475-019	DIODE, ZENER HZ6B1
===MAIN CIRCUIT BOARD SECTION===		
C101	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C102	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C103	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C104	★87-018-119-019	CAP, CERA-SOL SS 100P-50 B
C105	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C106	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C107	★87-010-404-019	CAP, ELECT 4.7-50 SME
C108	★87-010-404-019	CAP, ELECT 4.7-50 SME
C109	★87-010-401-019	CAP, ELECT 1-50 SME
C111	★87-010-400-019	CAP, ELECT 0.47-50 SME
C112	★87-018-133-019	CAP, CERA-SOL SS 4700P-16 X
C113	★87-010-374-019	CAP, ELECT 47-10
C114	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C115	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C116	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C117	★87-010-374-019	CAP, ELECT 47-10
C118	★87-010-408-019	CAP, ELECT 47-50 SME
C119	★87-010-370-019	CAP, ELECT 330-6.3 SME
C132	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C134	★87-010-404-019	CAP, ELECT 4.7-50 SME
C135	★87-018-131-019	CAP, CERA-SOL SS 1000P-50 B
C143	★87-018-111-019	CAP, CERA-SOL SS 27P-50 SL
C144	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C145	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C146	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C151	★87-018-132-019	CAP, CERA-SOL SS 2200P-16 X
C152	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C153	★87-018-127-019	CAP, CERA-SOL SS 470P-50 B
C156	★87-010-405-019	CAP, ELECT 10-50 SME
C157	★87-010-545-019	CAP, ELECT 0.22-50 SME
C159	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C160	★87-010-404-019	CAP, ELECT 4.7-50 SME
C161	★87-010-374-019	CAP, ELECT 47-10
C162	★87-010-374-019	CAP, ELECT 47-10
C164	★87-010-374-019	CAP, ELECT 47-10
C165	★87-010-131-019	CAP, ELECT 0.47-50 BP
C167	★87-018-202-019	CAP, CERA-SOL SS 6800P-16 X
C168	★87-018-202-019	CAP, CERA-SOL SS 6800P-16 X
C171	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C172	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C173	★87-010-263-019	CAP, ELECT 100-10
C174	★87-018-131-019	CAP, CERA-SOL SS 1000P-50 B
C175	★87-010-405-019	CAP, ELECT 10-50 SME
C177	★87-018-132-019	CAP, CERA-SOL SS 2200P-16 X
C179	★87-010-384-019	CAP, ELECT 100-25 SME
C180	★87-010-384-019	CAP, ELECT 100-25 SME
C181	★87-010-374-019	CAP, ELECT 47-10
C182	★87-010-374-019	CAP, ELECT 47-10
C183	★87-010-374-019	CAP, ELECT 47-10
C193	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C301	★87-018-150-019	CAP, CERA-SOL SS 18P-50 CH
C302	★87-018-150-019	CAP, CERA-SOL SS 18P-50 CH
C303	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C304	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C305	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C306	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C311	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C312	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C313	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C314	★87-018-117-089	CAP, CERA-SOL SS 68P-50 SL
C315	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C316	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C317	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C318	★87-018-119-089	CAP, CERA-SOL SS 100P-50 B
C323	★87-014-069-019	CAP, PP 3300P-100 J
C324	★87-014-069-019	CAP, PP 3300P-100 J
C325	★87-014-045-019	CAP, PP 330P-100 J
C326	★87-014-045-019	CAP, PP 330P-100 J
C329	★87-010-914-010	CAP, ELECT 47-10 BP ASP
C330	★87-010-914-010	CAP, ELECT 47-10 BP ASP
C333	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C334	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C337	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C338	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C341	★87-018-127-019	CAP, CERA-SOL SS 470P-50 B
C342	★87-018-127-019	CAP, CERA-SOL SS 470P-50 B
C343	★87-018-127-019	CAP, CERA-SOL SS 470P-50 B
C344	★87-018-127-019	CAP, CERA-SOL SS 470P-50 B
C351	★87-010-910-010	CAP, ELECT 47-10 ASF
C352	★87-010-910-010	CAP, ELECT 47-10 ASF
C353	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C355	★87-010-910-010	CAP, ELECT 47-10 ASF
C356	★87-010-910-010	CAP, ELECT 47-10 ASF
C357	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C358	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C359	★87-010-910-010	CAP, ELECT 47-10 ASF
C360	★87-010-910-010	CAP, ELECT 47-10 ASF
C361	★87-010-910-010	CAP, ELECT 47-10 ASF
C362	★87-010-910-010	CAP, ELECT 47-10 ASF

REF. NO.	PART NO.	DESCRIPTION
C363	★87-010-910-010	CAP, ELECT 47-10 ASF
C364	★87-010-910-010	CAP, ELECT 47-10 ASF
C365	★87-010-910-010	CAP, ELECT 47-10 ASF
C366	★87-010-910-010	CAP, ELECT 47-10 ASF
C375	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C376	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C382	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C383	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C384	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C385	★87-018-115-019	CAP, CERA-SOL SS 47P-50 SL
C386	★87-018-131-019	CAP, CERA-SOL SS 1000P-50 B
C387	★87-010-374-019	CAP, ELECT 47-10
C388	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C389	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C492	★87-010-909-010	CAP, ELECT 100-10 ASF
C493	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C501	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C506	★87-010-374-019	CAP, ELECT 47-10
C508	★87-010-374-019	CAP, ELECT 47-10
C509	★87-010-374-019	CAP, ELECT 47-10
C510	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C511	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C512	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C604	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C611	★87-010-374-019	CAP, ELECT 47-10
C612	★87-010-374-019	CAP, ELECT 47-10
C613	★87-010-374-019	CAP, ELECT 47-10
C614	★87-010-374-019	CAP, ELECT 47-10
C701	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C702	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C704	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C710	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C731	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C751	★87-018-131-019	CAP, CERA-SOL SS 1000P-50 B
C753	★87-010-374-019	CAP, ELECT 47-10
EM103	★87-008-372-010	FILTER, EMI BL 01RN1
EM104	★87-008-372-010	FILTER, EMI BL 01RN1
EM303	★87-008-372-010	FILTER, EMI BL 01RN1
EM304	★87-008-372-010	FILTER, EMI BL 01RN1
EM311	★87-008-372-010	FILTER, EMI BL 01RN1
EM312	★87-008-372-010	FILTER, EMI BL 01RN1
J101	★87-009-023-010	JACK PIN YKC21-0349(ANALOG OUT)
J102	87-002-211-010	IC, GP1F32T(DIGITAL OUT)
LPF701	★89-AC1-610-019	FILTER, H327LNKS1329MGD
R116	★87-025-429-010	RES, M/F 47K-1/6W F
R117	★87-025-429-010	RES, M/F 47K-1/6W F
R171	★87-025-475-010	RES, NF 22-1/4W J
SFR101	★87-024-169-010	SFR 2.2K
SFR151	★87-024-173-010	SFR 22K
SFR152	★87-024-173-010	SFR 22K
SFR153	★87-024-173-010	SFR 22K
SFR154	★87-024-173-010	SFR 22K
X301	★84-733-617-010	VIB, XTAL 16.9344MHz

===FRONT-1 CIRCUIT BOARD SECTION===

FL201	89-AC1-609-010	FL, 12BT45GK(DISPLAY)
FW201	★89-AC1-641-110	FLAT CABLE
SW201	87-036-259-088	SW, TACT(1)
SW202	87-036-259-088	SW, TACT(2)
SW203	87-036-259-088	SW, TACT(3)
SW204	87-036-259-088	SW, TACT(4)
SW205	87-036-259-088	SW, TACT(5)
SW206	87-036-259-088	SW, TACT(6)
SW207	87-036-259-088	SW, TACT(7)
SW208	87-036-259-088	SW, TACT(8)
SW209	87-036-259-088	SW, TACT(9)
SW210	87-036-259-088	SW, TACT(10)

REF. NO.	PART NO.	DESCRIPTION
SW211	87-036-259-088	SW, TACT(>10)
SW212	87-036-259-088	SW, TACT(PRGM)
SW213	87-036-259-088	SW, TACT(CHECK)
SW214	87-036-259-088	SW, TACT(DELETE)
SW215	87-036-259-088	SW, TACT(AC)
SW216	87-036-259-088	SW, TACT(■STOP)
SW217	87-036-259-088	SW, TACT(❚❚PAUSE)
SW218	87-036-259-088	SW, TACT(▶PLAY)
SW219	87-036-259-088	SW, TACT(⏮SKIP)
SW220	87-036-259-088	SW, TACT(⏭SKIP)
SW221	87-036-259-088	SW, TACT(◀◀SEARCH)
SW222	87-036-259-088	SW, TACT(▶▶SEARCH)
SW223	87-036-259-088	SW, TACT(▲OPEN/CLOSE)
SW224	87-036-259-088	SW, TACT(Q-PEAK SEARCH)
SW225	87-036-259-088	SW, TACT(CAL)
SW226	87-036-259-088	TACT SW(EDIT)
SW227	87-036-259-088	TACT SW(FADE/OUT)
SW228	87-036-259-088	TACT SW(FADE/IN)

===FRONT-2 CIRCUIT BOARD SECTION===

SW229	87-036-259-088	SW, TACT(TIME)
SW230	87-036-259-088	SW, TACT(BLANK)
SW231	87-036-259-088	SW, TACT(RANDOM)
SW232	87-036-259-088	SW, TACT(—▶INDEX)
SW233	87-036-259-088	SW, TACT(◀—INDEX)
SW234	87-036-259-088	SW, TACT(REPEAT/1/ALL)
SW235	87-036-259-088	SW, TACT(A↔B)
SW246	87-036-087-010	SW, SLIDE(TIMER)

===PT CIRCUIT BOARD SECTION===

C401	★87-010-124-019	CAP, ELECT 4700-16V
C402	★87-015-997-019	CAP, ELECT 2200-16V SME
C403	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C404	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C405	★87-010-263-019	CAP, ELECT 100-10
C406	★87-010-263-019	CAP, ELECT 100-10
C407	★87-010-410-019	CAP, ELECT 330-50 SME
C408	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C420	★87-018-209-089	CAP, CERA-SOL SS 0.1-50 F
C409	★87-018-209-019	CAP, CERA-SOL SS 0.1-50 F
C410	★87-010-235-019	CAP, ELECT 470-16 SME
C411	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
⚠C421	★87-019-113-090	CAP, FILM SG 2200P-400(FMG)
C481	★87-010-906-010	CAP, ELECT 2200-25V ASF
C482	★87-010-906-010	CAP, ELECT 2200-25V ASF
C483	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C484	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C485	★87-010-909-010	CAP, ELECT 100-10 ASF
C486	★87-010-909-010	CAP, ELECT 100-10 ASF
⚠PT401	82-AC1-603-018	POWER TRANSFORMER E/Z(E)
⚠PT401	82-AC1-604-019	POWER TRANSFORMER K(K)
⚠SW401	87-036-015-019	SW, AC(POWER)

===HP CIRCUIT BOARD SECTION===

C415	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C416	★87-018-134-019	CAP, CERA-SOL SS 0.01-16 Y
C371	★87-010-263-089	CAP, ELECT 100-10
C372	★87-010-263-089	CAP, ELECT 100-10
C373	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C374	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C391	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C392	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C393	★87-018-134-089	CAP, CERA-SOL SS 0.01-16 Y
C732	★87-018-209-019	CAP, CERA-SOL 0.1-50 F
C801	★87-018-119-019	CAP, CERA-SOL SS 100P-50 B
C802	★87-018-119-019	CAP, CERA-SOL SS 100P-50 B
EM391	★87-008-372-089	FILTER, EMI BL 01RN1
EM392	★87-008-372-089	FILTER, EMI BL 01RN1

REF. NO.	PART NO.	DESCRIPTION
EM393	★87-008-372-089	FILTER, EMI BL 01RN1
J302	87-009-043-019	JACK, 6-3(PHONES)
VR301	82-AC1-608-010	VR, 50KA×2(LEVEL)
M301	+ + +	MOTOR(LEVEL)

===MOTOR-1 CIRCUIT BOARD SECTION===

M1	9X-262-513-210	MOTOR GEAR ASSY(SLED)
M2	9X-262-513-310	MOTOR ASSY(W/CHASSIS. T. T)(SPINDLE)
SW1	91-572-086-110	LEAF SW(INSIDE LIMIT)

===MOTOR-2 CIRCUIT BOARD SECTION===

M3	9X-262-511-710	MOTOR ASSY(LOADING)
SW2	91-572-086-110	LEAF SW(OPEN)
SW3	91-572-086-110	LEAF SW(CLOSE)

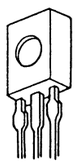
===MISCELLANEOUS===

	98-848-127-11Z	OPTICAL PICK UP KSS-210A
⚠	★87-034-781-018	AC CORD<E>(E)
⚠	★87-034-592-018	AC CORD<K>(K)
⚠	★87-085-185-010	BUSHING, AC CORD E

IC DESCRIPTION and IC BLOCK DIAGRAM

- For IC DESCRIPTION, refer to pages 23 to 30 of the XC－900 service manual (S／M code No.91－042) and pages 6 to 7 of the XC－500 service manual (S／M code No.91－021).
- For IC BLOCK DIAGRAM, refer to page 13 of the XC－900 service manual (S／M code No.91－042).

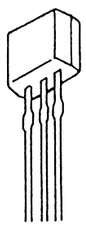
TRANSISTOR ILLUSTRATION



2SB1329

2SB1332

2SC1815



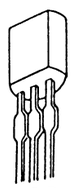
2SD2144

DTA114

DTA144

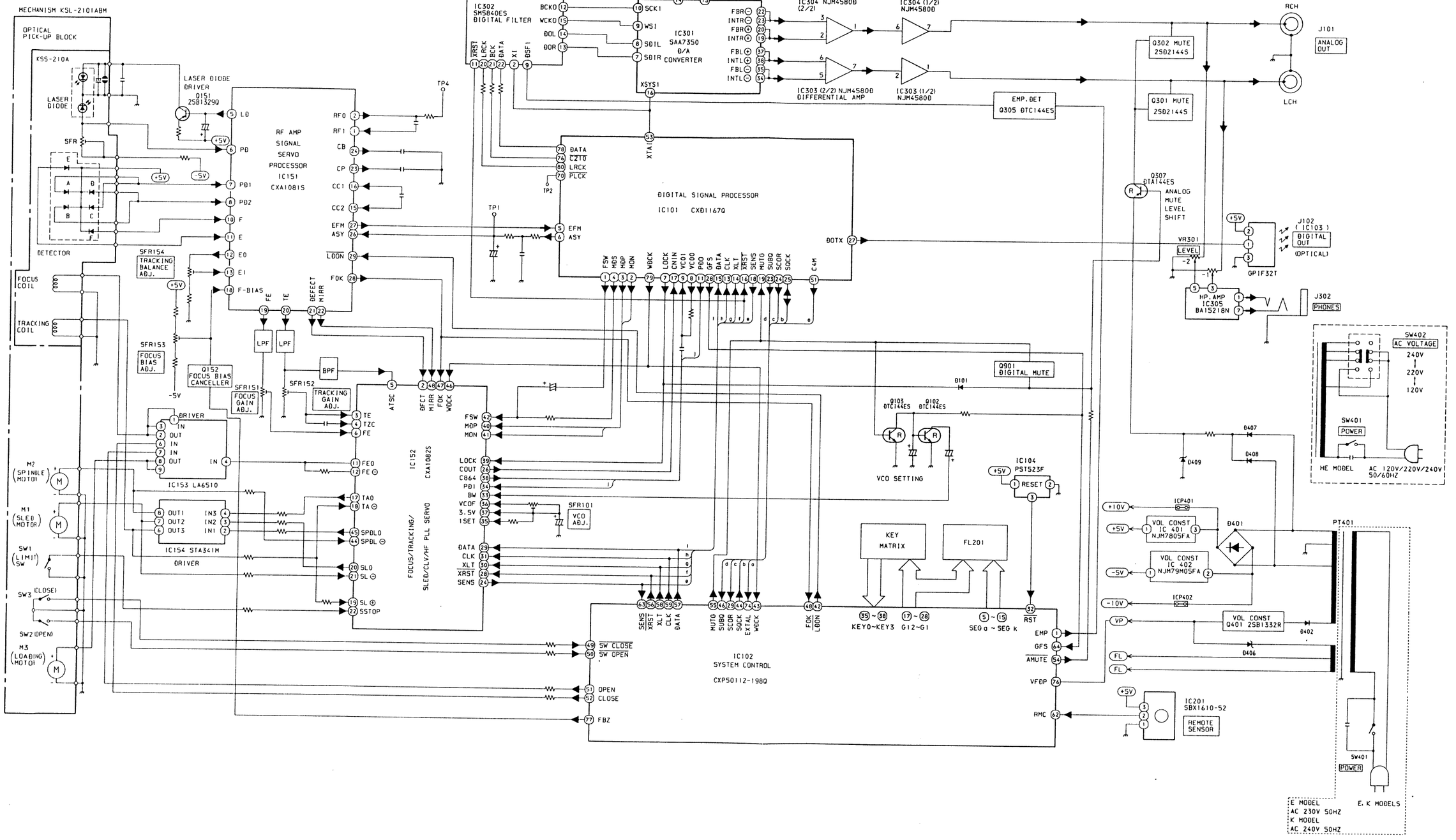
DTC114

DTC144

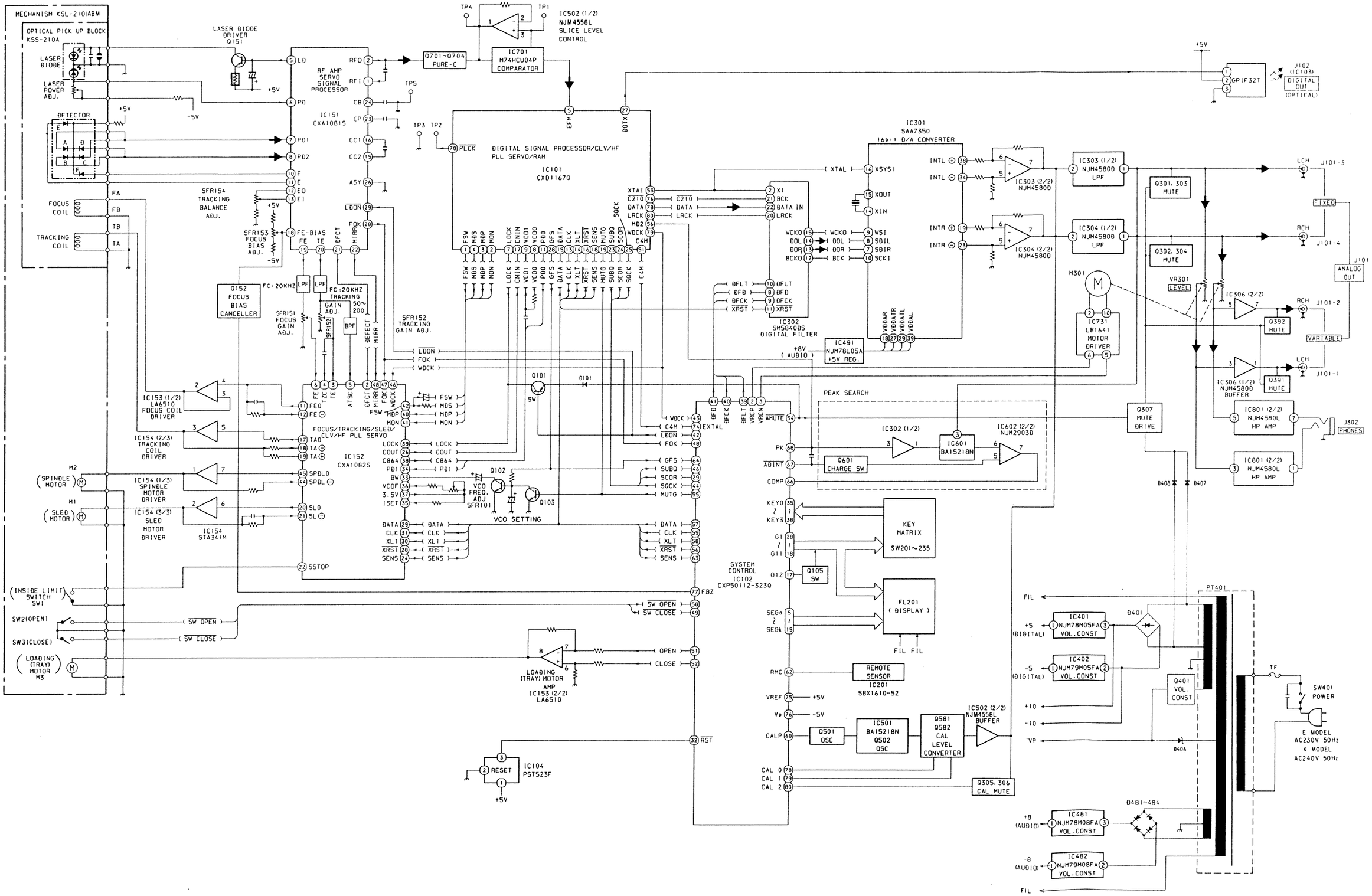


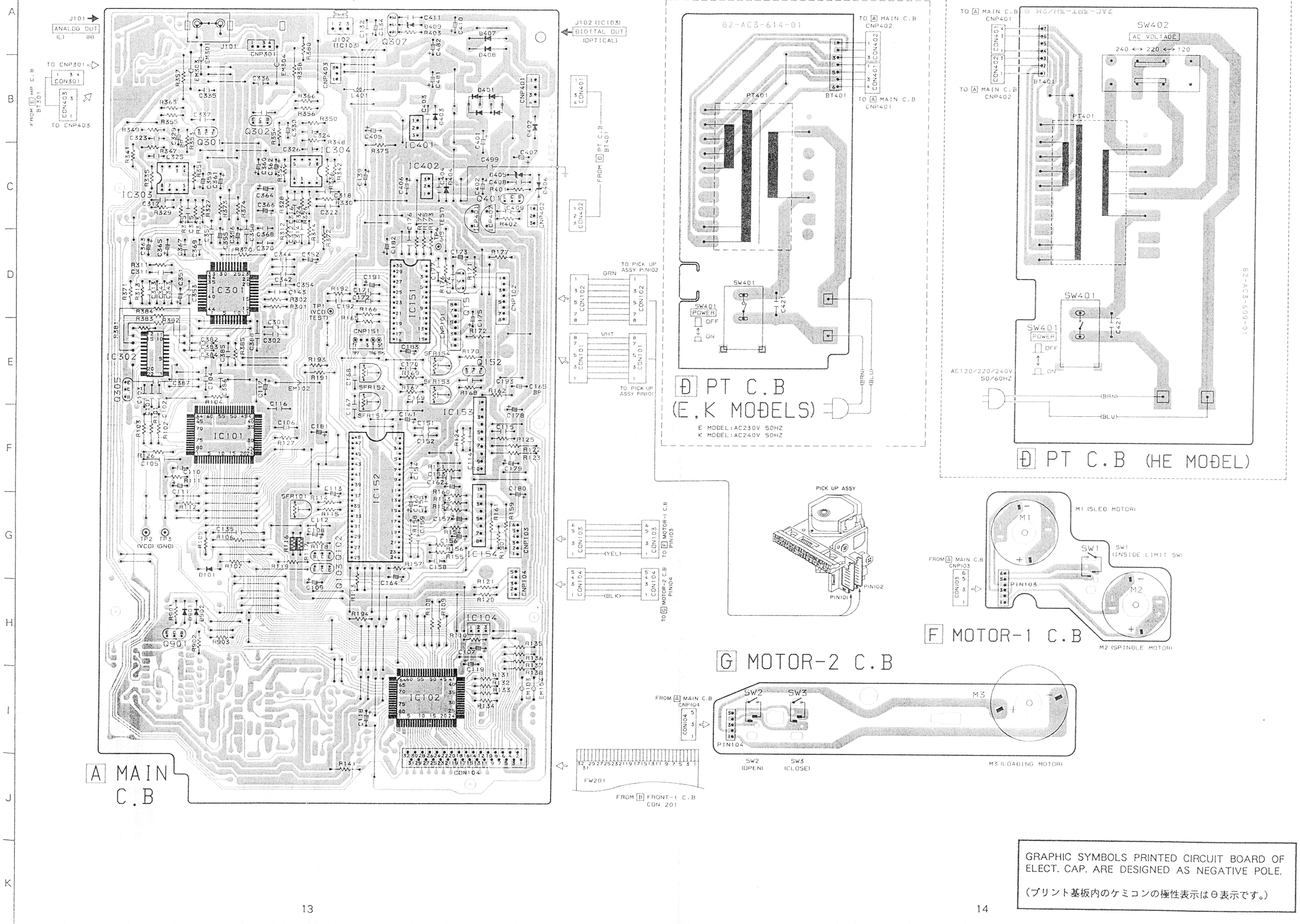
2SK246

BLOCK DIAGRAM (XC – 550)



BLOCK DIAGRAM (XC – 950)

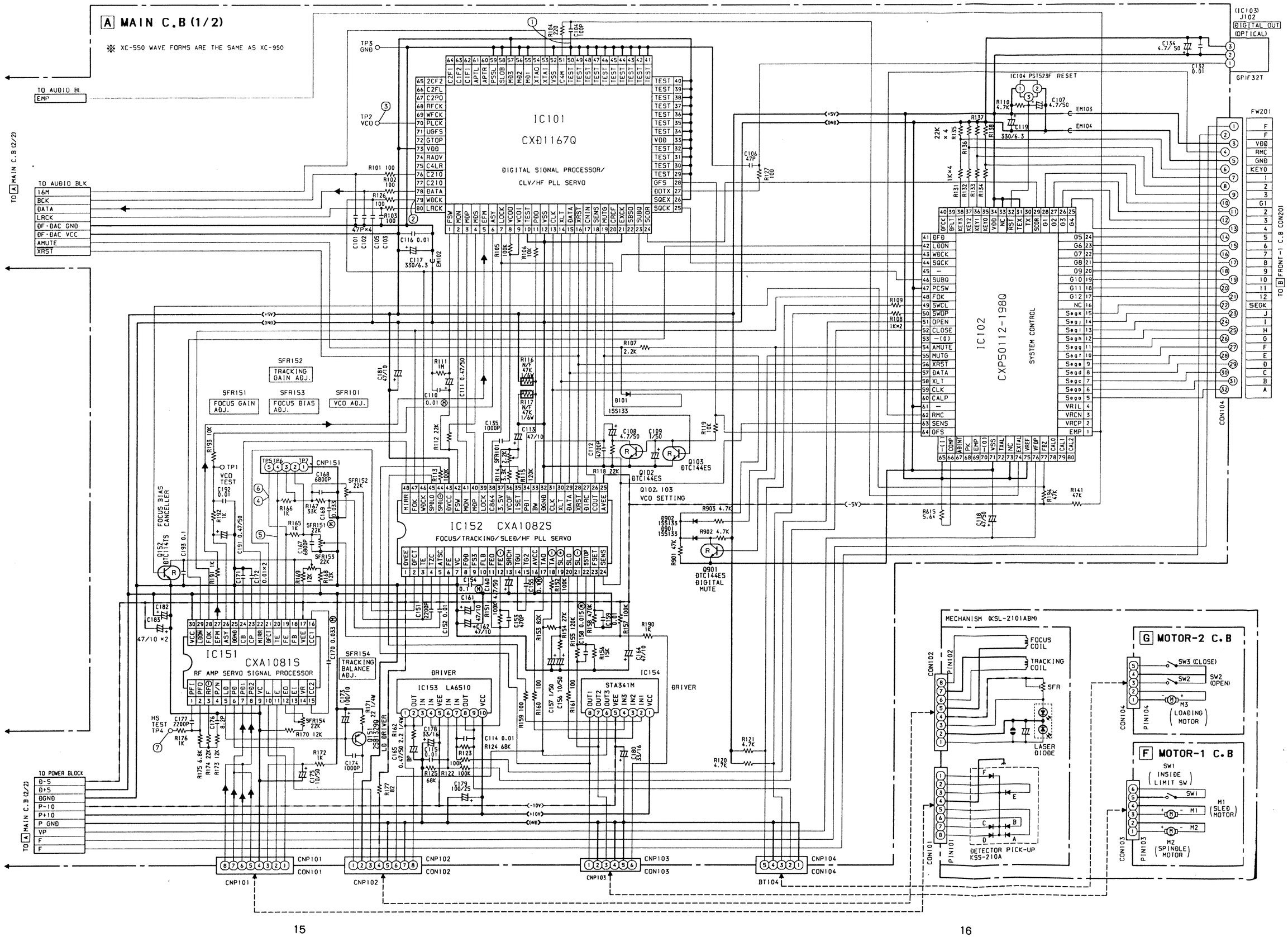




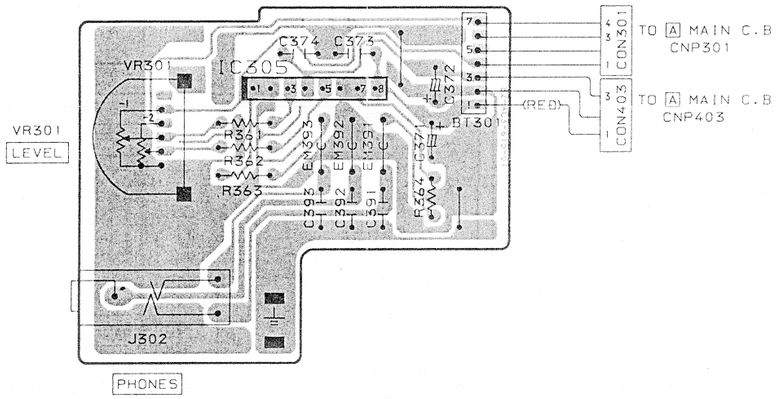
GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

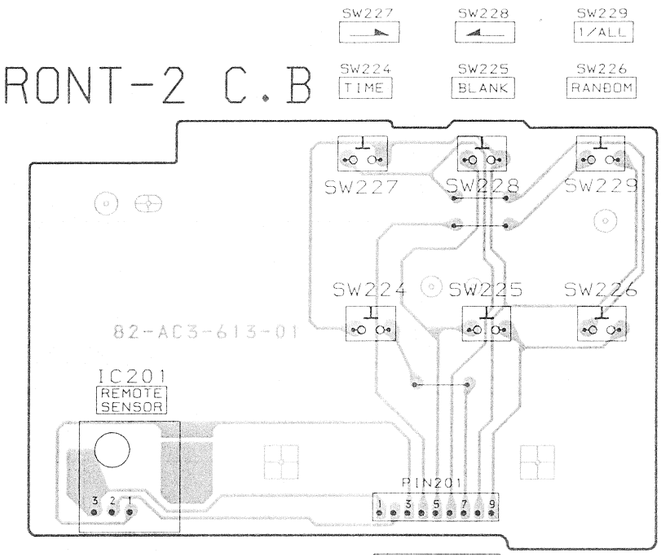
SCHEMATIC DIAGRAM – 1 (XC – 550)

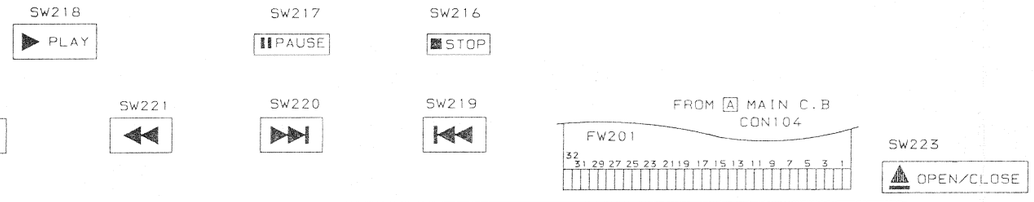


E HP C.B

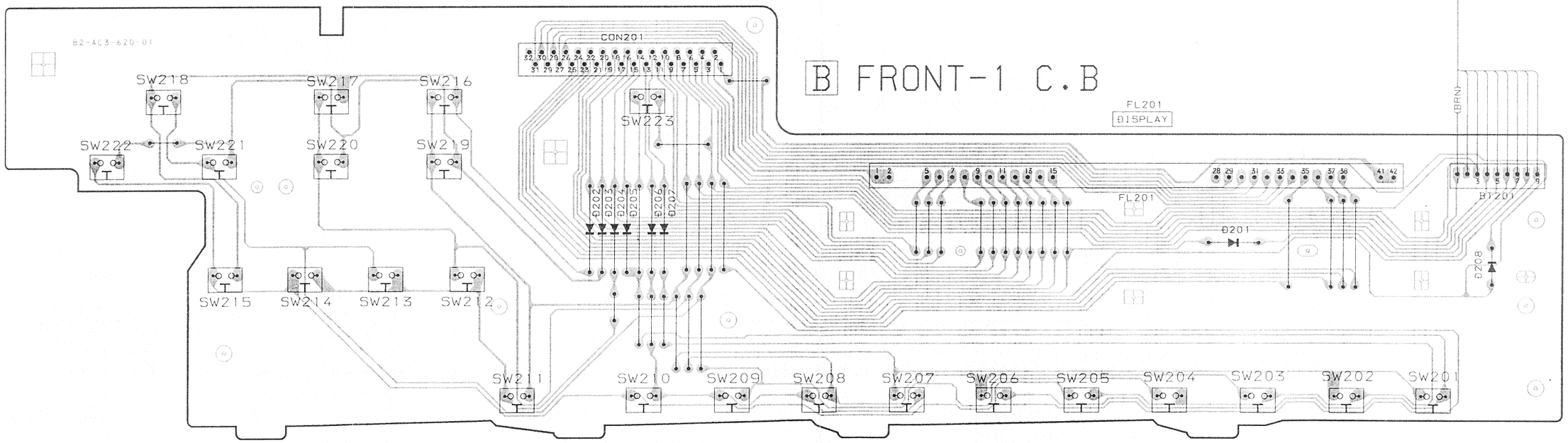


C FRONT-2 C.B





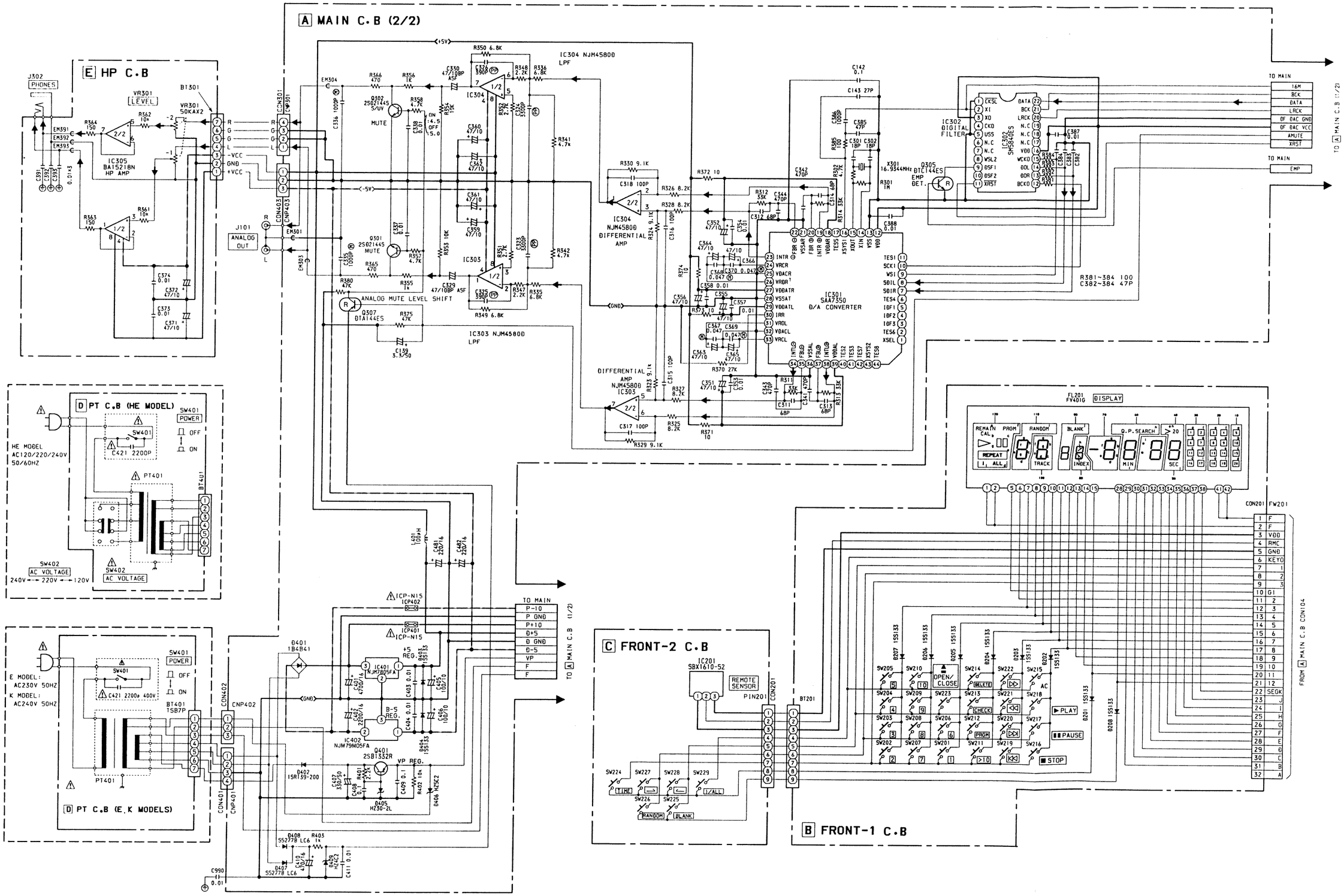
B FRONT-1 C.B

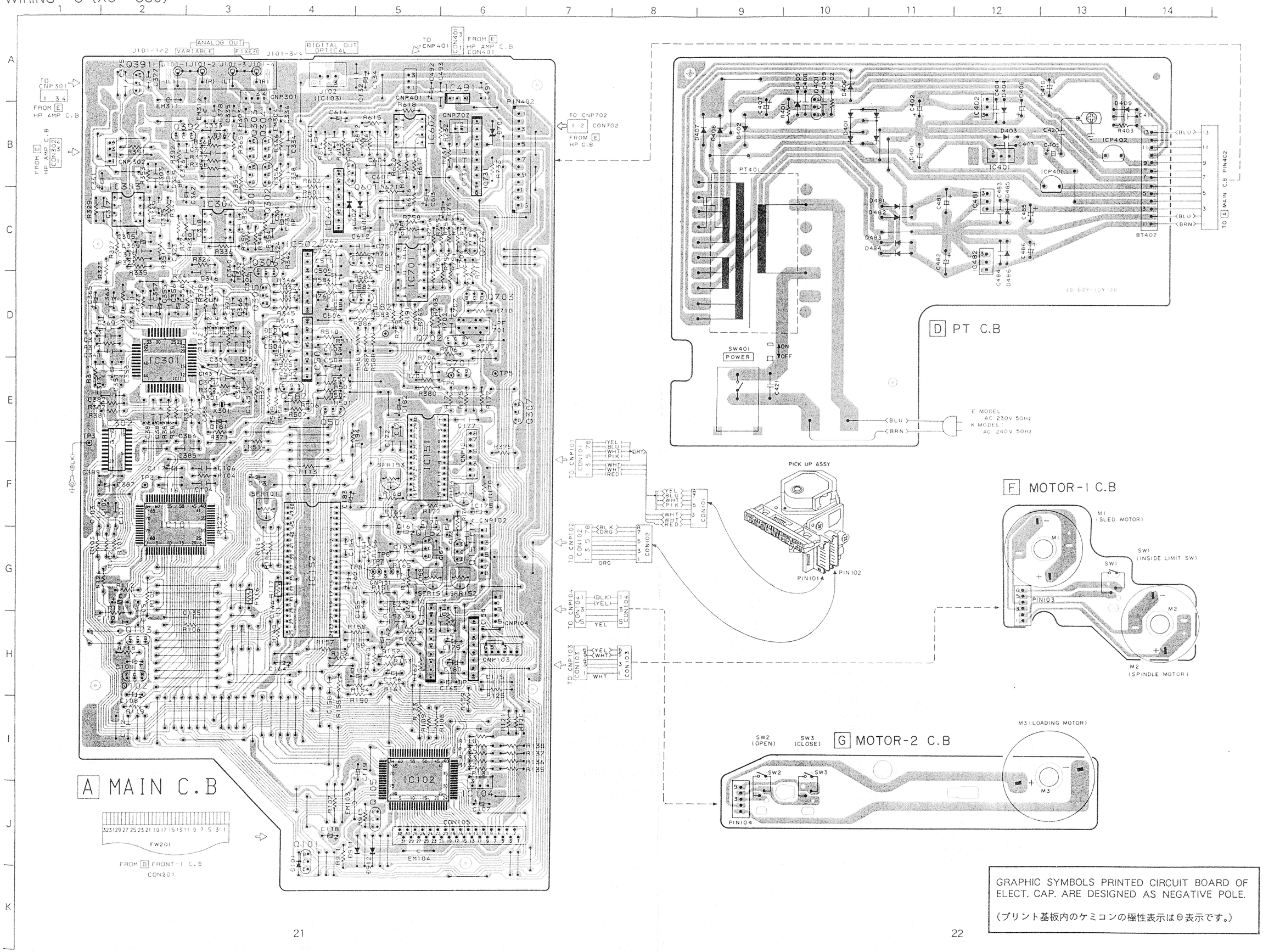


SW215 AC | SW214 DELETE | SW213 CHECK | SW212 PRGM | SW211 >10 | SW210 10 | SW209 9 | SW208 8 | SW207 7 | SW206 6 | SW205 5 | SW204 4 | SW203 3 | SW202 2 | SW201 1

GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

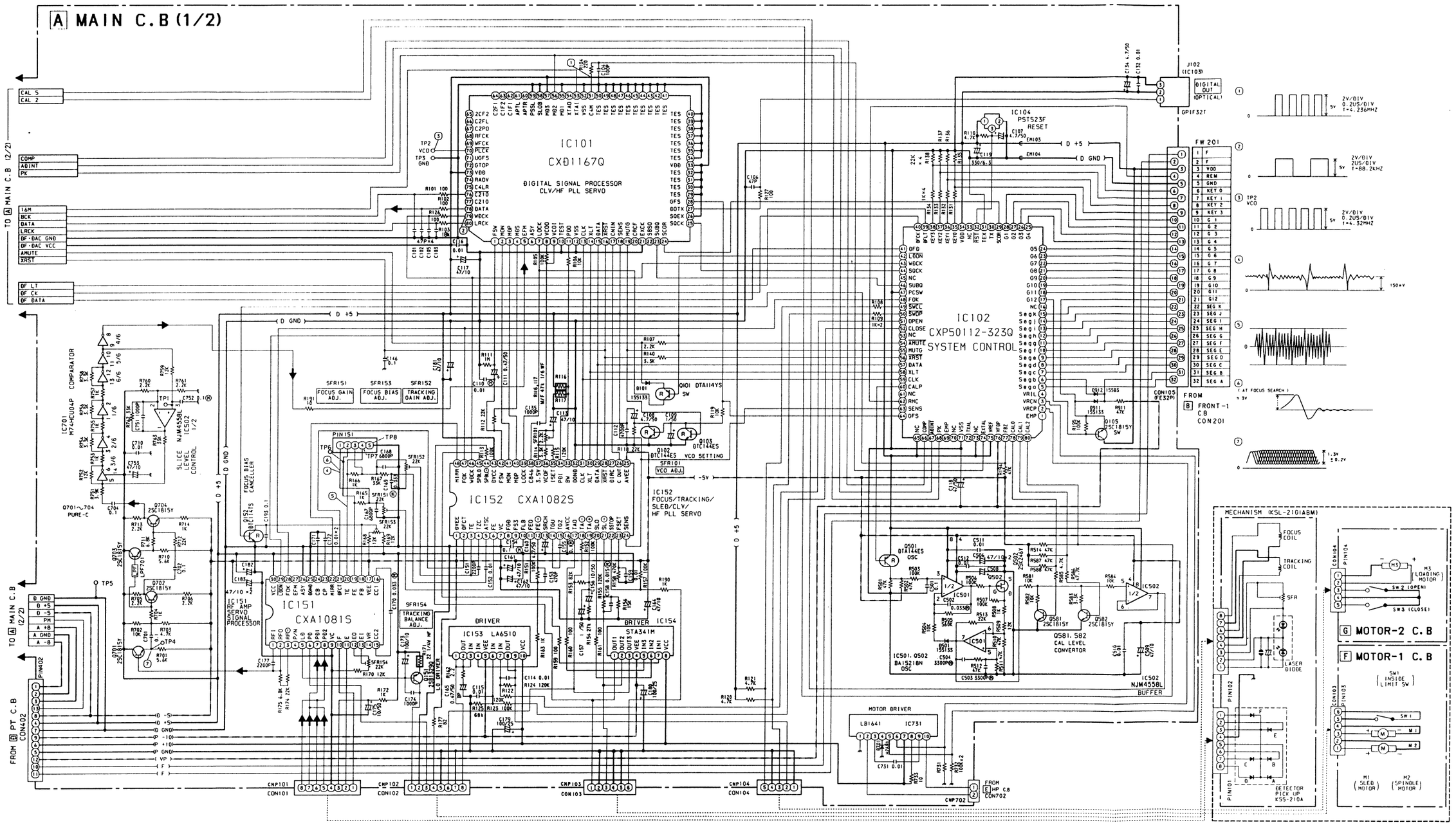

A MAIN C.B (2/2)
E HP C.B
D PT C.B (HE MODEL)
D PT C.B (E,K MODELS)
C FRONT-2 C.B
B FRONT-1 C.B
IC304 NJM45800 LPF
IC303 NJM45800 LPF
IC304 NJM45800 DIFFERENTIAL AMP
DIFFERENTIAL AMP NJM45800 IC303
IC305 BA15218N HP AMP
IC301 SAA7350 D/A CONVERTER
IC302 DIGITAL FILTER
IC302 SM5804ES
Q305 DTC144ES EMP DET.
Q307 DTA144ES
ANALOG MUTE LEVEL SHIFT
IC401 NJM78M05FA
IC402 NJM79M05FA
Q401 2SB1332R
VP REG.
+5 REG.
B-5 REG.
IC201 SBX1610-52
REMOTE SENSOR
PIN201
CON201
BT201
FL201 FV401G
DISPLAY
CON201 FW201
TO MAIN
TO A MAIN C.B (1/2)
FROM A MAIN C.B CON104
HE MODEL AC120/220/240V 50/60HZ
E MODEL: AC230V 50HZ
K MODEL: AC240V 50HZ
SW401 POWER
SW402 AC VOLTAGE
R381~384 100
C382~384 47P



GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

(プリント基板内のケミコンの極性表示はθ表示です。)

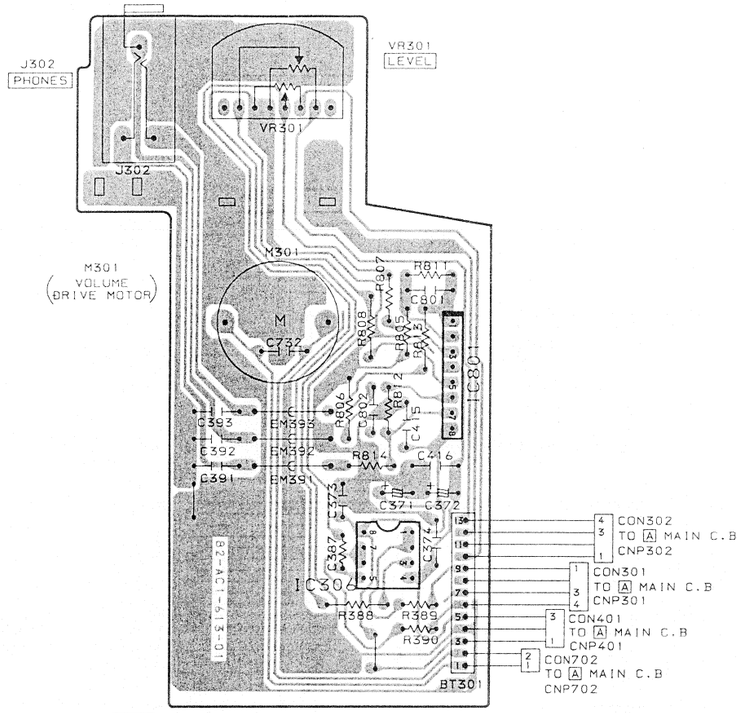
SCHEMATIC DIAGRAM – 3 (XC – 950)



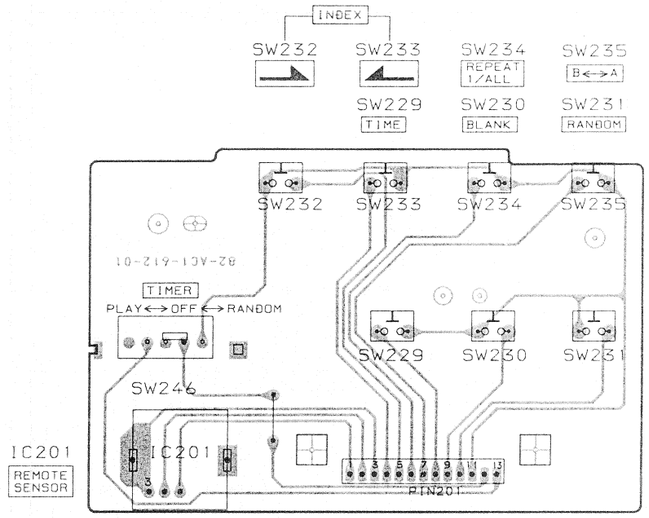
GRAPHIC SYMBOLS PRINTED CIRCUIT BOARD OF ELECT. CAP. ARE DESIGNED AS NEGATIVE POLE.

（プリント基板内のケミコンの極性表示はθ表示です。）

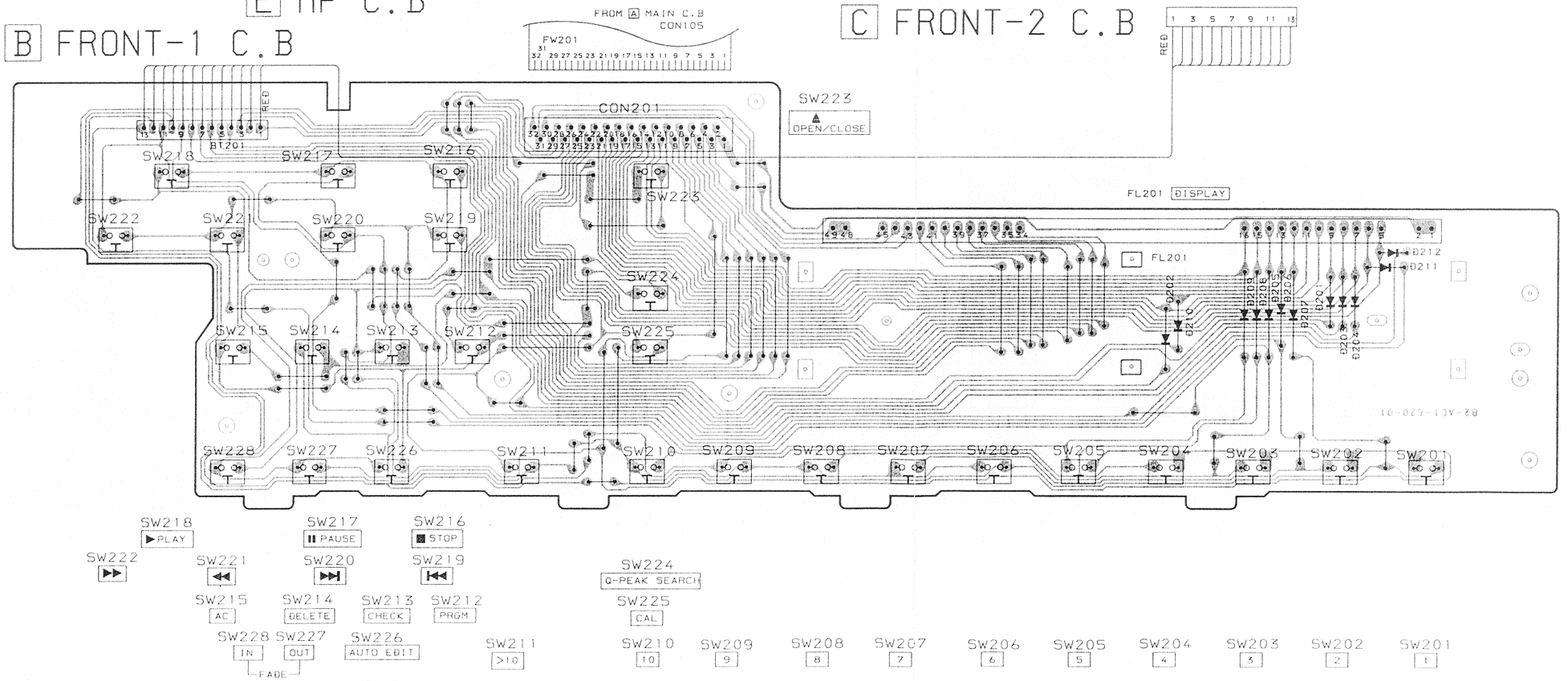
E HP C.B



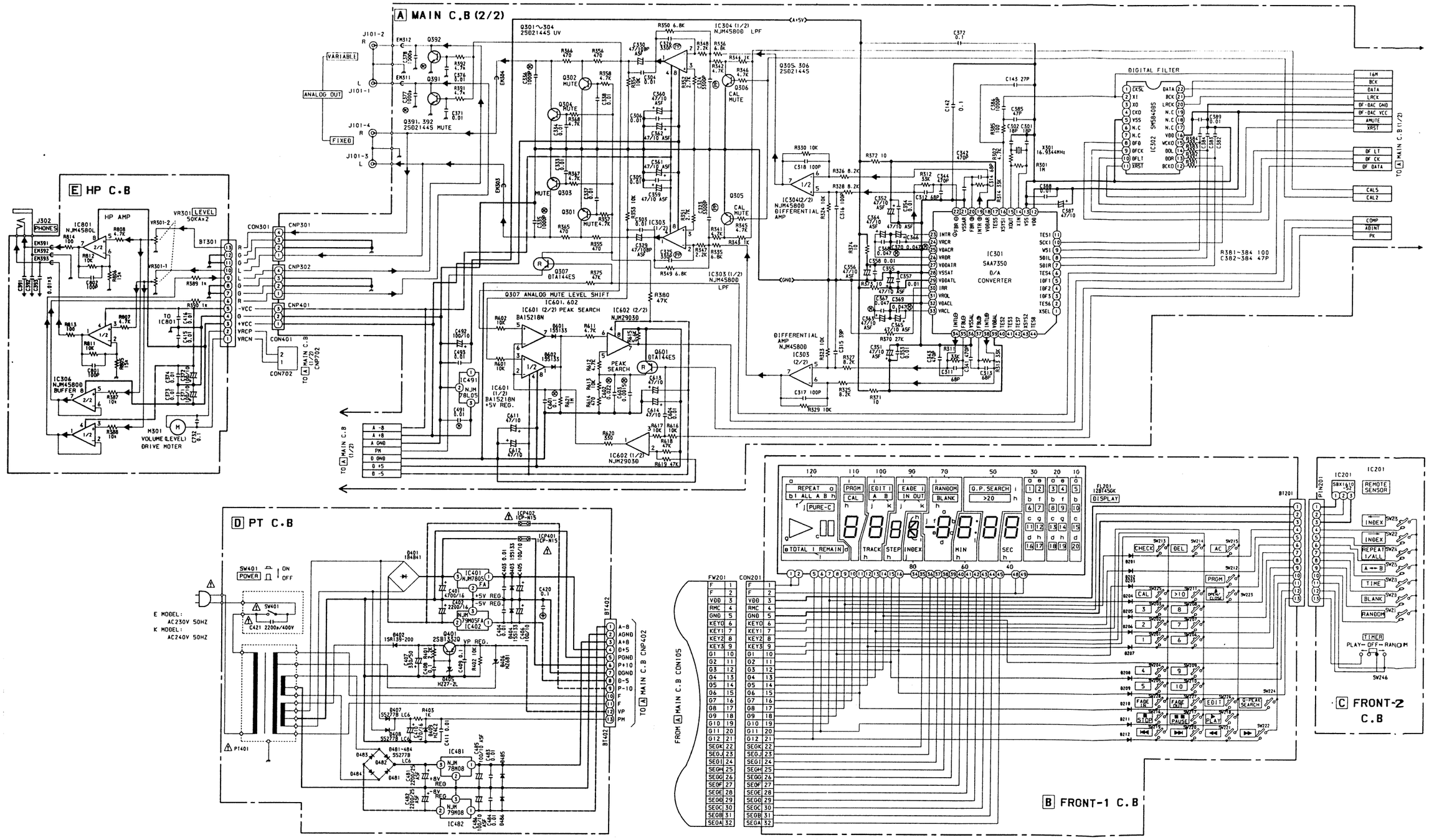
C FRONT-2 C.B



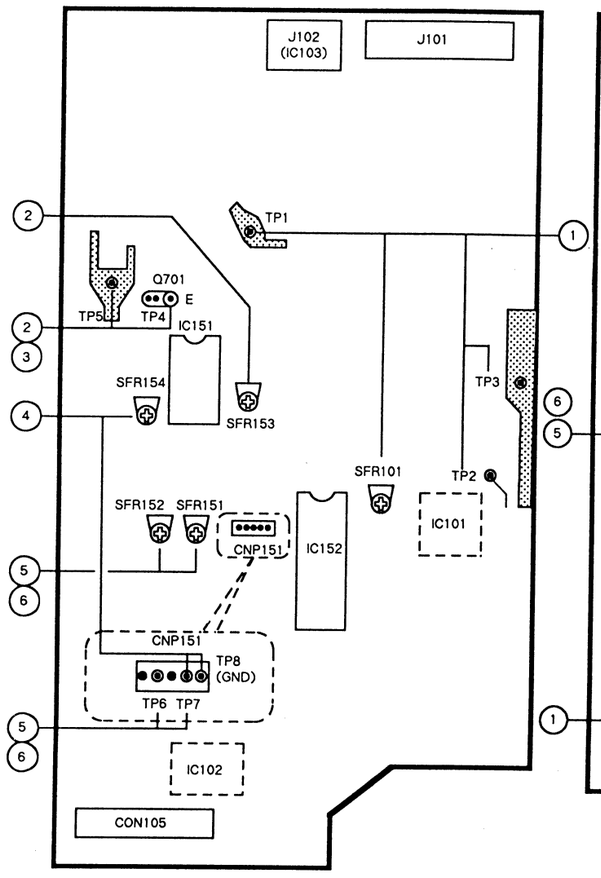
B FRONT-1 C.B



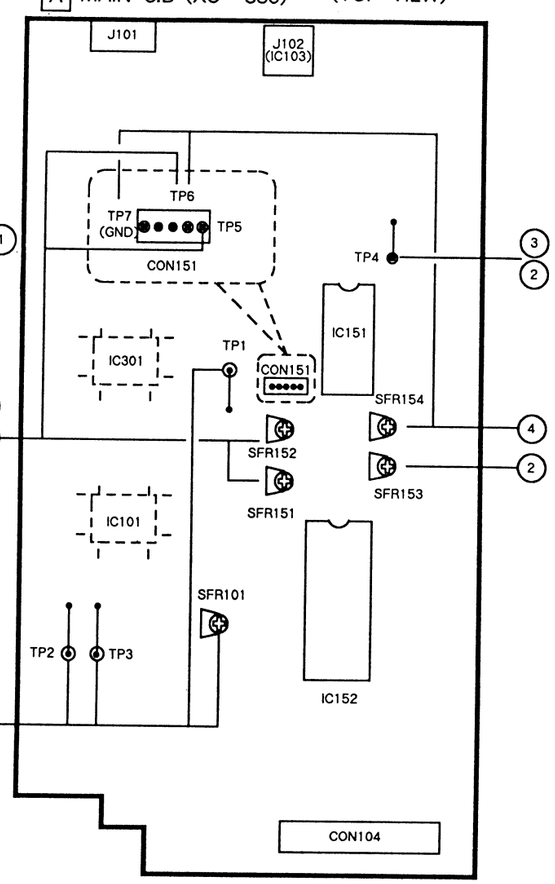
SCHEMATIC DIAGRAM – 4 (XC – 950)



A MAIN C.B (XC – 950) (TOP VIEW)



A MAIN C.B (XC – 550) (TOP VIEW)

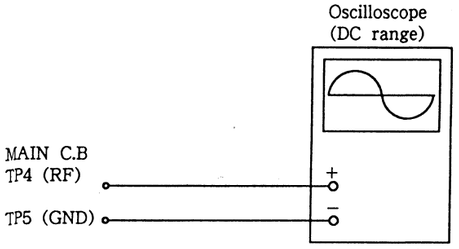


Note: Connect a probe (10 : 1) of the frequency counter or the oscilloscope to a test point.

① VCO Frequency Adjustment

1. Connect and short between TP1 and CHASSIS (GND).
2. Connect the frequency counter to test points TP2 (VCO) and TP3 (GND).
3. Adjust SFR101 (VCO) so that the frequency counter reading is 4.32 ± 0.01MHz.
4. After the adjustment is completed, remove the short lead wire from TP1 and CHASSIS (GND).

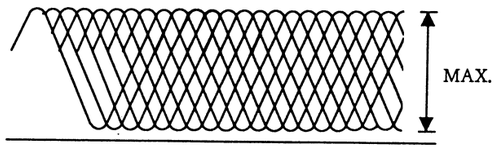
② Focus Bias Adjustment



Make the focus bias adjustment when replacing and repairing the optical block.

1. Connect an oscilloscope to test points TP4 (RF) and GND (XC – 950 : TP5).
2. Turn on the power switch.
3. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4. Adjust SFR153 (F.B) so that the amplitude of waveform on the oscilloscope is maximized.

RF signal waveform



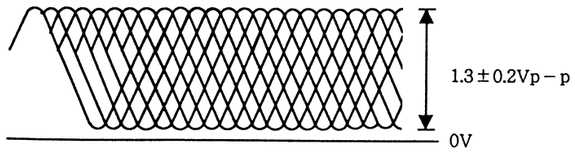
VOLT/DIV : 50mV
TIME/DIV : 0.5 μ S

③ RF Waveform Check

This check should be performed whenever the optical block is replaced in repair.

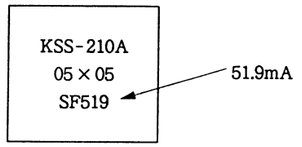
1. Connect an oscilloscope to test points TP4 (RF) and TP5 (GND).
2. Turn on the power switch.
3. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4. Check that the waveform appears as shown in the figure below.

RF signal waveform



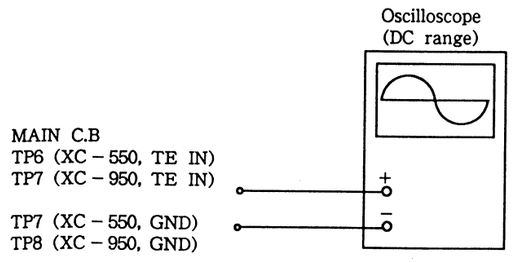
VOLT/DIV : 50mV
TIME/DIV : 0.5 μ S

Note : The current of the laser signal can be checked with the voltages on both sides of R171 (22 Ω). The difference for the specified value shown on the label must be within ± 6.0mA.

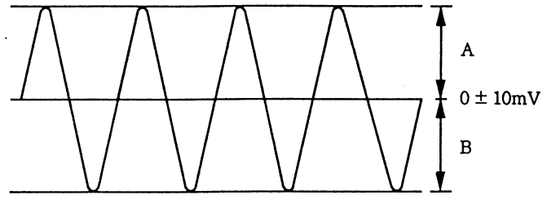


$$\text{Laser current } Iop = \frac{\text{Voltage across R171}}{22\ \Omega}$$

④ Tracking Balance Adjustment



1. XC – 550 : Connect an oscilloscope to TP6 (TE IN), TP7 (GND).
   XC – 950 : Connect an oscilloscope to TP7 (TE IN), TP8 (GND).
2. Connect center pin SFR152 (TE) to ground.
3. Turn on the power switch.
4. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
5. Adjust SFR154 (TB) so that the waveform on the oscilloscope is vertically symmetrical as figure shown .



A = B

VOLT/DIV : 50mV
TIME/DIV : 2mS

6. After the adjustment is completed, remove the ground lead wires from the terminals.

⑤, ⑥ Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.
However, this gain has a margin, so even if it is slightly off, there is no problem. Therfore, do not perform this adjustment.
Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechinical shock when 2-axis device operates.
However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise increases when the 2-axis device opearates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

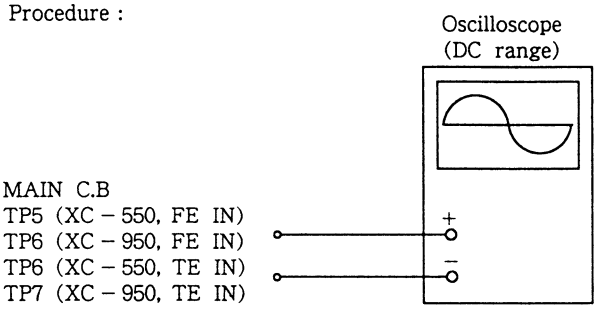
Symptoms \ Gain	(Focus)	Tracking
● The time until music starts becomes longer for STOP→▶ PLAY or automatic selection (⏮ ⏭ buttons pressed.) (Normally takes about 2 seconds.)	low	low or high
● Music does not start and disc continues to rotate for STOP →▶PLAY or automatic selection (⏮ ⏭ buttons pressed.)	–	low
● Disc stops to rotate shortly after STOP→▶PLAY.	low or high	–
● Sound is interrupted during PLAY, or time counter display stops.	–	low
● More noises during the 2-axis device operation.	high	high

The following is simple adjustment method.

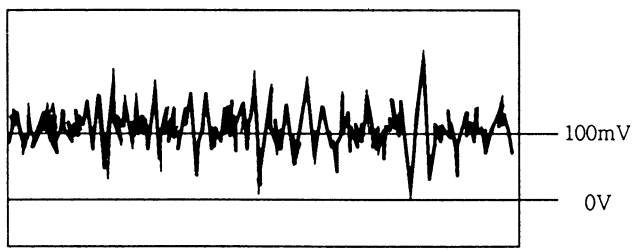
– Simple adjustment –

Note : Since exact adjustment cannot be performed, remember the positions of the controls before the performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

Procedure :



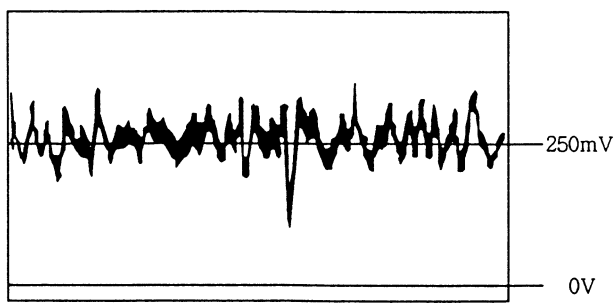
1. Keep the set horizontal.
   If the set is not horizontal, this adjustment cannot be perform due to the gravity against the 2-axis device.
2. Insert test disc TCD-782 (YEDS-18) and play back the second composition.
3. Connect an oscilloscope to TP5 (XC – 550, FE IN) or TP6 (XC – 950, FE IN).
4. Adjust SFR151 (FE) so that the waveform is as shown in the figure belowfocus gain adjustment)



VOLT/DIV : 10mV
TIME/DIV : 2mS

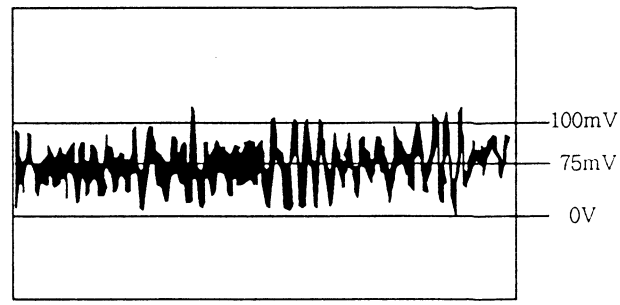
● Incorrect Examples (DC level changes more than on – adjusted waveform).

low focus gain



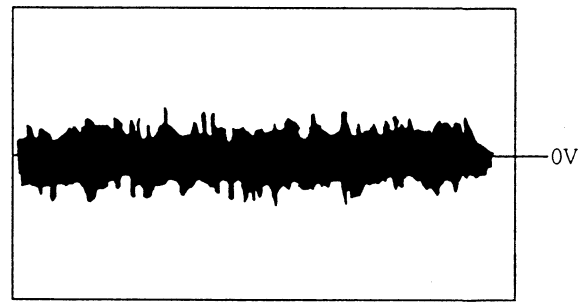
VOLT/DIV : 10mV
TIME/DIV : 2mS

high focus gain



VOLT/DIV : 10mV
TIME/DIV : 2mS

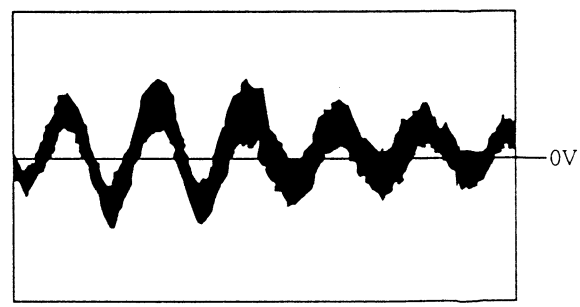
5. Connect an oscilloscope to TP6 (XC – 550, TE IN) or TP7 (XC – 950, TE IN).
6. Adjust SFR152 (TE) so that the waveform is as shown in the figure below (tracking gain adjustment).



VOLT/DIV : 50mV
TIME/DIV : 2mS

● Incorrect Example (fundamental wave appears).

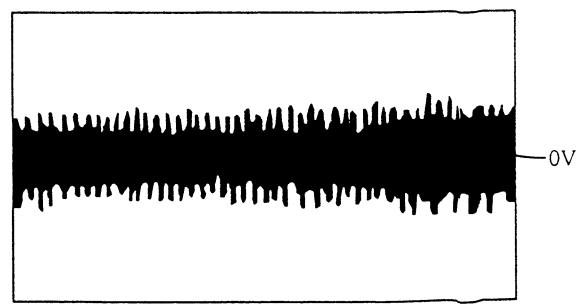
Lower tracking gain



VOLT/DIV : 50mV
TIME/DIV : 2mS

high tracking gain

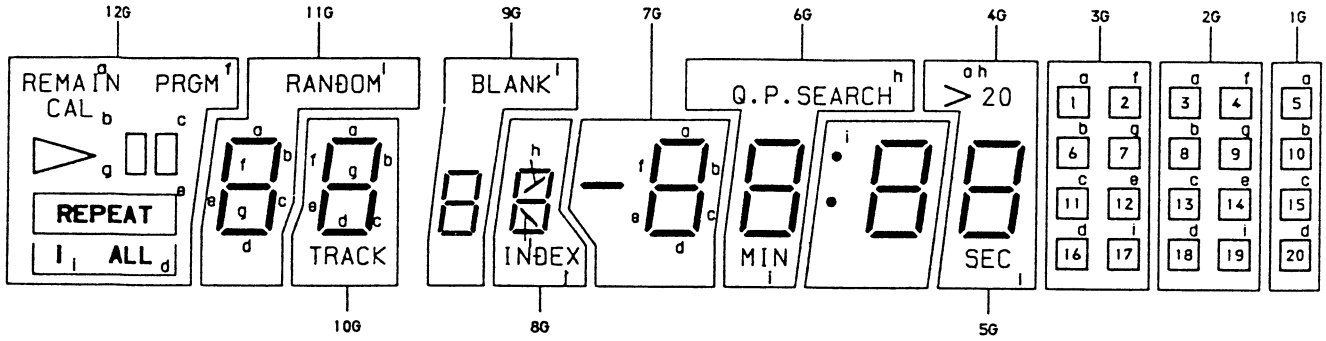
(higher fundamental wave than for low gain).



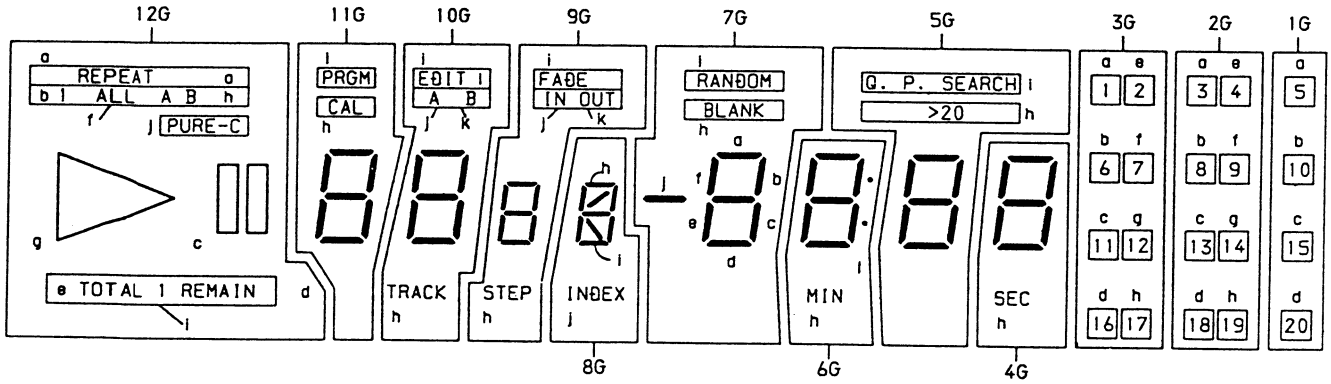
VOLT/DIV : 50mV
TIME/DIV : 2mS

DISPLAY

FL201 (XC – 550)

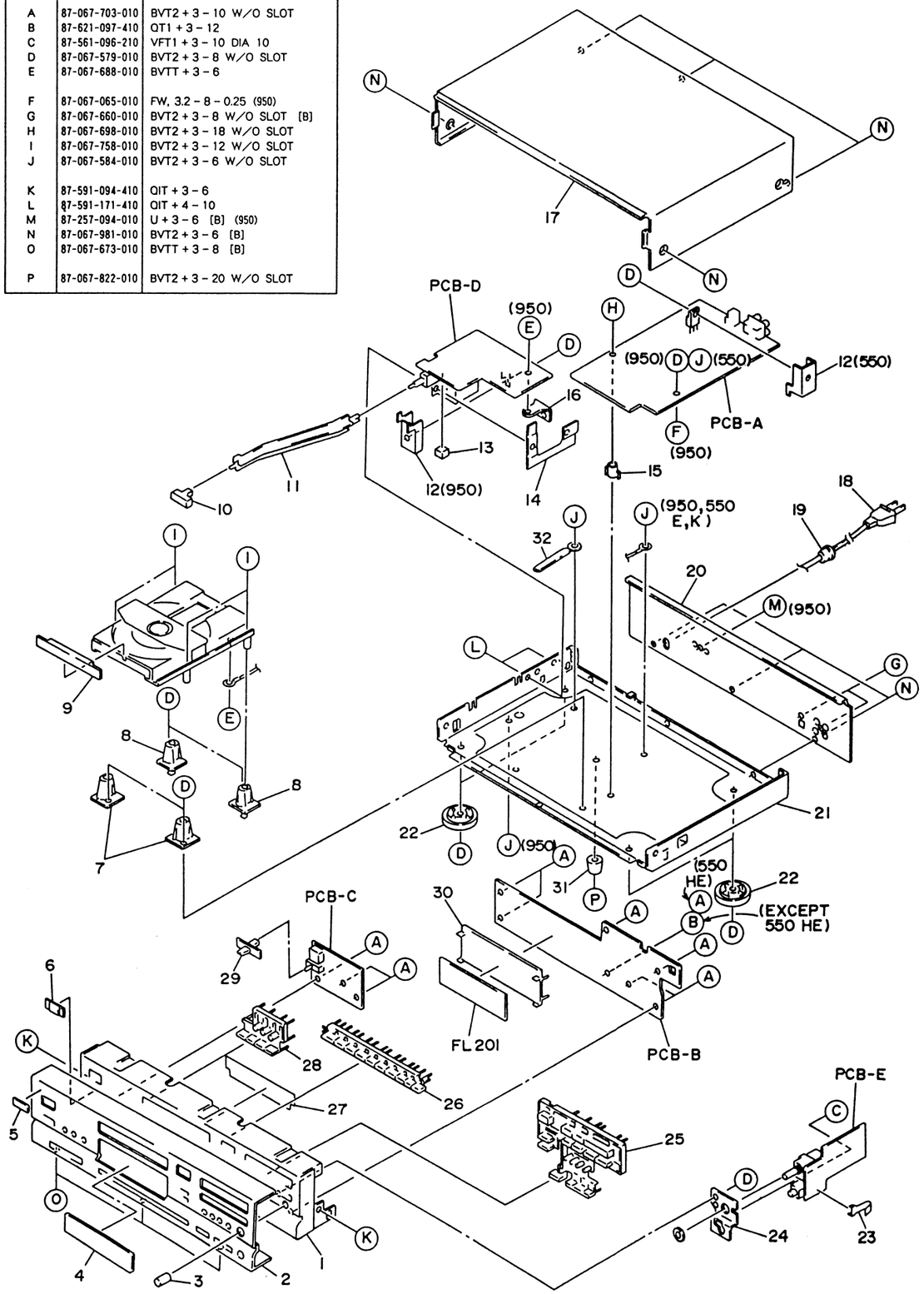


FL201 (XC – 950)



EXPLODED VIEW – 1

REF. NO.	PART NO.	DESCRIPTION
A	87-067-703-010	BVT2 + 3 – 10 W/O SLOT
B	87-621-097-410	QT1 + 3 – 12
C	87-561-096-210	VFT1 + 3 – 10 DIA 10
D	87-067-579-010	BVT2 + 3 – 8 W/O SLOT
E	87-067-688-010	BVTT + 3 – 6
F	87-067-065-010	FW, 3.2 – 8 – 0.25 (950)
G	87-067-660-010	BVT2 + 3 – 8 W/O SLOT [B]
H	87-067-698-010	BVT2 + 3 – 18 W/O SLOT
I	87-067-758-010	BVT2 + 3 – 12 W/O SLOT
J	87-067-584-010	BVT2 + 3 – 6 W/O SLOT
K	87-591-094-410	QIT + 3 – 6
L	87-591-171-410	QIT + 4 – 10
M	87-257-094-010	U + 3 – 6 [B] (950)
N	87-067-981-010	BVT2 + 3 – 6 [B]
O	87-067-673-010	BVTT + 3 – 8 [B]
P	87-067-822-010	BVT2 + 3 – 20 W/O SLOT

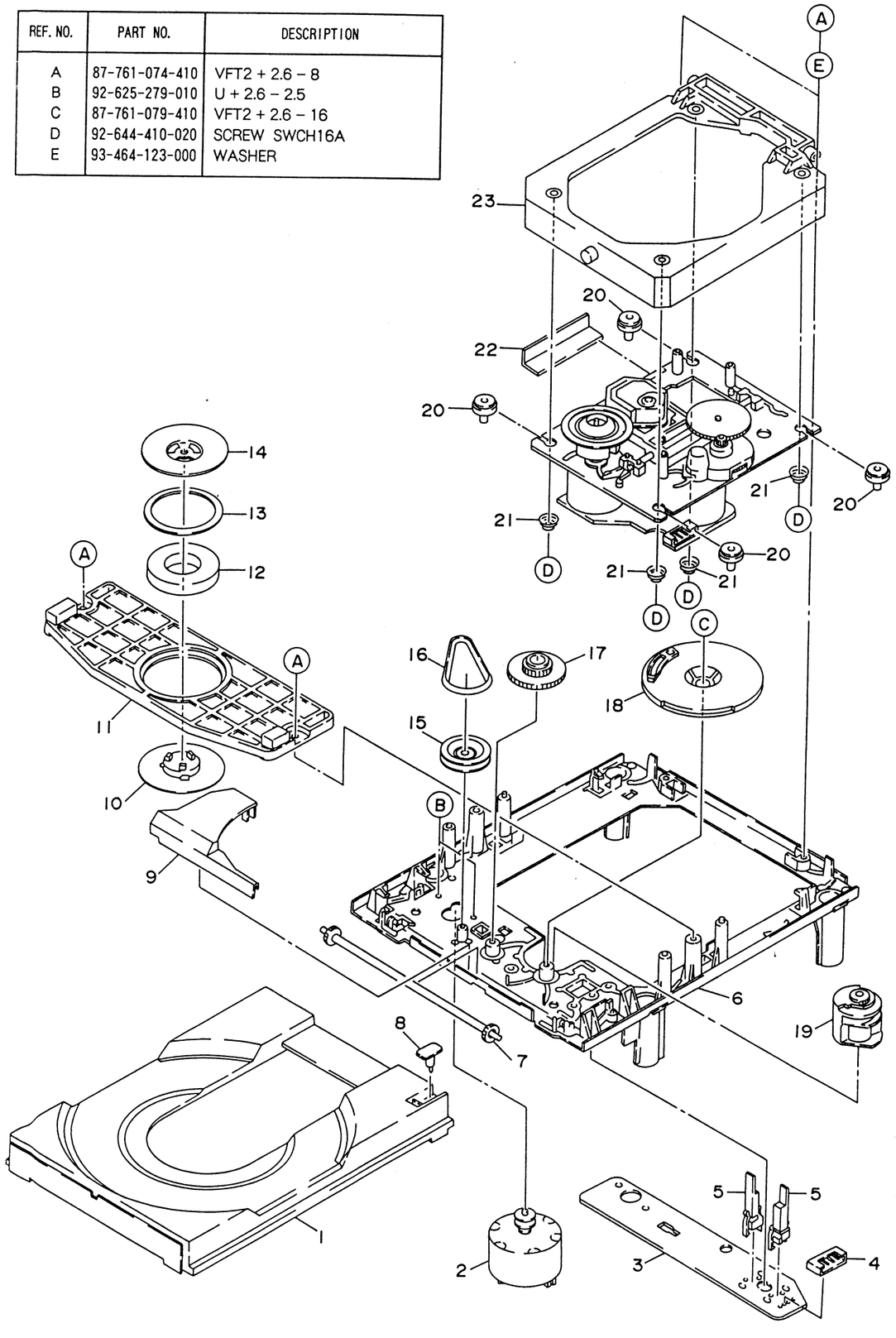


MECHANICAL PARTS LIST

PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	1-1	★82-AC1-001-119	CABINET, FRONT	※	1
	1-2	★82-AC1-002-010	PANEL, FRONT (950)	※	1
	1-2	★82-AC3-002-010	PANEL, FRONT (550)	※	1
	1-3	★82-AC1-011-019	KNOB, VOLUME (950)	※	1
	1-3	★82-AC1-012-019	KNOB, HP VOLUME (550)	※	1
	1-4	★82-AC1-018-010	WINDOW, FL (950)	※	1
	1-4	★82-AC3-018-010	WINDOW, FL (550)	※	1
	1-5	★81-DS1-011-019	BADGE, AIWA		1
	1-6	★82-AA1-020-019	WINDOW, RC		1
	1-7	---	HOLDER, CD MECHANISM		2
	1-8	---	HOLDER, CD MECHANISM 2		2
	1-9	★82-AC1-003-019	PANEL, TRAY	※	1
	1-10	★82-AA1-016-019	BUTTON, POWER		1
	1-11	★82-AC1-204-019	ROD, POWER	※	1
	1-12	---	HEAT SINK		1
	1-13	★82-AC3-201-019	CUSHION, G 9.5 – 10 – 10 (550 HE)	※	1
	1-14	---	HOLDER, PT		1
	1-15	---	HOLDER, P.C.B		1
	1-16	★82-318-203-010	HOLDER, PW BOARD MAIN (950)		1
	1-17	★82-AC1-008-018	CABINET, STEEL (950, 550 E, K)	※	1
	1-17	★82-AC1-004-019	CABINET, STEEL (550 HE)	※	1
	1-18	★87-034-781-018	CORD, AC (950, 550 E)		1
	1-18	★87-034-592-018	CORD, AC (950, 550 K)		1
	1-18	★82-187-797-019	CORD, AC (550 HE)		1
	1-19	★87-085-185-010	BUSHING, AC CORD		1
	1-20	★82-AC1-006-019	PANEL, REAR (950 E)	※	1
	1-20	★82-AC1-007-019	PANEL, REAR (950 K)	※	1
	1-20	★82-AC3-005-019	PANEL, REAR (550 HE)	※	1
	1-20	★82-AC3-006-019	PANEL, REAR (550 E)	※	1
	1-20	★82-AC3-007-019	PANEL, REAR (550 K)	※	1
	1-21	★81-AC3-206-218	CHASSIS, MAIN (950, 550 E, K)	※	1
	1-21	★82-AC1-206-119	CHASSIS, MAIN (550 HE)	※	1
	1-22	★82-AA1-029-010	FOOT		4
	1-23	★89-AC1-205-110	P – SPRING, HP		1
	1-24	---	HOLDER, HP		1
	1-25	★82-AC1-016-019	KEY, FUNCTION (950)	※	1
	1-25	★82-AC3-016-019	KEY, FUNCTION (550)	※	1
	1-26	★82-AC1-015-019	KEY, TEN	※	1
	1-27	★82-AC1-019-019	SHEET, FL	※	1
	1-28	★82-AC1-014-019	KEY, INDEX (950)	※	1
	1-28	★82-AC3-014-019	KEY, INDEX (550)	※	1
	1-29	★82-AC1-013-019	KNOB, TIMER (950)	※	1
	1-30	★89-AC1-207-019	GUIDE, FL (950)		1
	1-30	★89-AC2-201-019	GUIDE, FL (550)		1
	1-31	★82-AC1-010-010	FOOT, H17.5	※	1
	1-32	---	BINDER, WIRE (550 E, K)		1

EXPLODED VIEW – 2

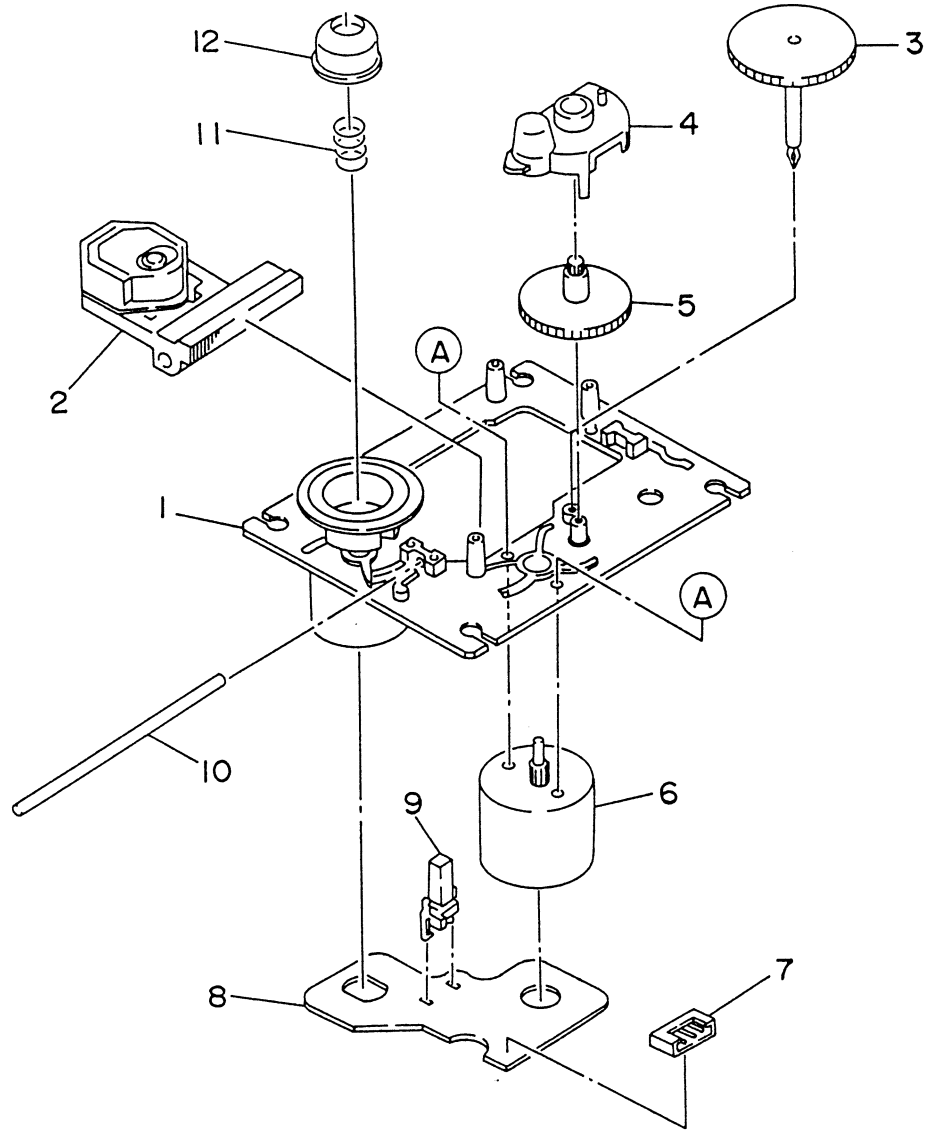
REF. NO.	PART NO.	DESCRIPTION
A	87-761-074-410	VFT2 + 2.6 – 8
B	92-625-279-010	U + 2.6 – 2.5
C	87-761-079-410	VFT2 + 2.6 – 16
D	92-644-410-020	SCREW SWCH16A
E	93-464-123-000	WASHER



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	2-1	★92-625-288-040	TRAY		1
	2-2	★9X-262-511-710	LOADING MOTOR ASSY		1
	2-3	---	PWB, LOADING		1
	2-4	★91-564-721-110	CONNECTOR 5P		1
	2-5	91-572-086-110	SWITCH, LEAF		2
	2-6	---	CHASSIS, MAIN		1
	2-7	★92-625-275-030	GEAR, TRAY		1
	2-8	---	SW PIN		1
	2-9	★92-625-282-020	COVER, GEAR		1
	2-10	★92-625-286-030	PULLEY, CHUCKING		1
	2-11	★92-625-284-040	PLATE, CHUCKING		1
	2-12	★91-452-493-210	MAGNET		1
	2-13	★92-625-541-010	DAMPER		1
	2-14	★92-625-277-010	YOKE, CHUCK		1
	2-15	★92-625-276-010	PULLEY, LOADING		1
	2-16	★93-653-387-000	BELT, LM		1
	2-17	★92-625-274-020	GEAR, MEDDLE		1
	2-18	★92-625-285-030	GEAR, DRIVE		1
	2-19	★92-625-283-020	CAM, CONTROL		1
	2-20	★92-625-278-010	INSULATOR		4
	2-21	★92-625-280-010	SPRING		4
	2-22	---	PLATE, PUSH		1
	2-23	---	SUB CHASSIS ASSY W/INSU SHAFT		1

EXPLODED VIEW – 3

REF. NO.	PART NO.	DESCRIPTION
A	87-261-032-210	V + 2 – 3



PART NO. CHANGED TO	REF. NO.	PART NO.	DESCRIPTION	COMMON MODEL	Q'TY
	3-1	★9X-262-513-310	T.T CHASSIS ASSY W/MOTOR		1
	3-2	98-848-127-11Z	PICK UP KSS – 210A		1
	3-3	★92-625-188-020	GEAR, A		1
	3-4	★92-625-544-010	COVER		1
	3-5	---	GEAR, B		1
	3-6	★9X-262-513-210	SLED MOTOR ASSY		1
	3-7	★91-564-722-110	CONNECTOR 6P		1
	3-8	---	PWB, MOTOR		1
	3-9	91-572-085-110	SWITCH, LEAF LIMIT		1
	3-10	★94-917-565-010	SHAFT, SLED		1
	3-11	★92-625-191-010	SPRING, COMPRESSION		1
	3-12	★92-625-187-010	RING, CENTER		1

912204, 750038